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Full Name of Author — Nom complet de l'auteur

GRACE DOREEN McPIKE

Date of Birth — Date de naissance	Country of Birth — Lieu de naissance
April 29, ~~1929~~ 1944	CANADA

Permanent Address — Résidence fixe

19 GREAT Oaks, Sherwood Park, Alta.

Title of Thesis — Titre de la thèse

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1979	Dr Frances MacCannell

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HOW GRADE TEN STUDENTS INTERPRET METAPHOR IN POETRY WHEN READING, LISTENING, AND READING AND LISTENING

by

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

DEPARTMENT OF ELEMENTARY EDUCATION

EDMONTON, ALBERTA

AUGUST, 1979

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "How Grade Ten Students Interpret Metaphor in Poetry When Reading, Listening, and Reading and Listening" submitted by Grace D. McPike in partial fulfilment of the requirements for the degree of Master of Education.

Frances M. MacConnell
Supervisor

Date October 12, 1979

DEDICATION: TO MY BROTHER, ANDY

Tonight I walk the starlight
Shimmering void surrounds my mind
Moving effortlessly
Thru the bonds of space and time
Twirl eternity
Around my finger
Like a wreath
Lay back mystic mapping
Splitting atoms with my teeth

Its all now
not after
or before

Its all in your mind

You must find and turn
the handle of the door.

- Alex McPike

ABSTRACT

This descriptive study examined the responses of sixteen grade ten subjects to determine if their interpretations were personal, and if they were, to determine what factors contributed to the idiosyncratic meanings. Secondly, the researcher examined what effect the medium of presentation had upon the interpretations of the subjects. Lastly, the differences in the processing used by low and high readers were reported. In that the high readers produced more relationships, a comparison of their processing with that of the low readers yielded information about what processing patterns were most effective in interpreting metaphor.

Six poems were presented to each subject. Each student read two poems, listened to two poems, and read and listened to two poems. A series of questions were asked after the presentation of each poem. The first half of the questions were designed to elicit immediate, independent meaning, and emotional reaction, to the poem. The students also related what cues influenced their meaning. The second half of the questions probed each subject's meaning for the metaphors, and encouraged him to explain how the meaning of each metaphor contributed to the meaning of the poem, and to his feelings.

The study revealed that the subjects created individual interpretations for the poems, that were based upon distinct sets of cues which each individual had extracted from the poem, and upon the idiosyncratic interpretations of the metaphors. These metaphorical interpretations were influenced by the medium of presentation.

The medium of presentation affected the organizing patterns utilized by the subjects in interpreting metaphor. It also influenced

the number of cues chosen, the amount of information contained in each cue, the number of tenors and relationships provided for each metaphor, and the interpretation of the poem. Most subjects, especially the high readers, benefitted most from simultaneously reading and listening.

Encouraging the subject to interpret the metaphors resulted in a greater interaction with the work, which at times, created an alteration in the meaning of the work, and in the emotional reaction. In that meaning and the emotional reaction seemed to influence one another, the probing provided an important means of encouraging their interaction. Both high and low readers benefitted from the probing.

The conclusions of this study offer possible insights into the students' processing patterns. These insights, however, need to be validated. The criteria that were established by this research could now be used to validate the conclusions.

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CHAPTER 1

INTRODUCTION

Teaching students how to comprehend metaphor, especially in poetry, is one of the most difficult tasks faced by an English teacher. The teacher is confronted by a class of students who, generally, are, or quickly become, disenchanted with poetry when metaphorical comprehension is seemingly insurmountable. The children's frustration is most often not alleviated throughout their years of schooling. Why metaphorical interpretation is so difficult remains a mystery to both the students and teachers.

Although educators believe that students interpret metaphor inadequately, they seem to spend little time explaining to the children what steps to follow in interpreting a metaphor. The student is left to attempt whatever processes he thinks might work. Often his approach is inconsistent and haphazard. He may also be confused when he attempts to use a systematic procedure to infer a meaning, if he is told that his interpretation is inadequate. The problem may be that what the metaphor means is rarely separated from how the metaphor means. This separation for the purpose of teaching metaphor would perhaps benefit the student in that he could learn a logical procedure that could be applied to a work in order to find meaning.

The task of an educator, it would seem, is to provide and teach a systematic procedure to students having difficulty interpreting metaphor. What confines teachers, however, is an inadequate

reserve of information. How children interpret metaphor, what difficulties they experience, and what methods for teaching are most effective are rarely found in the literature on metaphor.

Emig (1972) criticizes the nature of the research on mataphor:

> If comprehending and creating metaphor form one of the pillars of human cognition, such a major mode of learning would seem an essential subject for research...yet, the literature surprises. The few direct efforts to describe how children deal with metaphor tend to be anecdotal, with little conceptual anchoring. Empirical studies concerning children and the role metaphor plays in their cognitive development scarcely exist. (pp. 164-165)

However, it would seem that studies determining the relationship between metaphor and cognitive development would be premature, until the underlying assumptions of metaphorical processing are questioned and empirically proven or disproven.

Among these assumptions most in need of questioning are three:

1. that agreement upon what a metaphor means may be attained, and therefore, a correct answer may be determined;
2. that the context of the work from which the metaphor is abstracted is not significant in determining its meaning;
3. that the medium of presentation of the metaphor has no effect upon interpretation.

It may be that processing is affected by all three, and that conclusions based upon these assumptions need to be re-examined.

I. PURPOSE

It was the purpose of this study to examine the following hypotheses:

1. Interpretations for poems and metaphors are unique, dependent upon the individual interpreter.
2. The complete context of a work significantly influences the metaphorical interpretation.
3. A difference in processing will be observed when the medium is altered from reading, to listening, to reading and listening.

The study is restricted to metaphorical interpretation in poetry, since short, complete works may be used, thus ensuring use of the complete context of the work. Also, since most studies on metaphor examined the subject's interpretation on the basis of his reading of the metaphor, excellent and poor readers were used to determine whether major changes in their processing occur when the communication medium is altered. The group being observed were grade ten high school students who, according to most of the literature, are capable of abstract thought.

Since the processing of metaphor is the major concern, how metaphor means rather than what metaphor means was the principle focus.

II. DEFINITIONS

METAPHOR

A metaphor is a figure of speech in which one term (usually

the tenor) is described or illuminated in terms of another element (usually called the vehicle). The tenor and vehicle are disparate realms, but have certain qualities that are alike. These common properties are called the ground or bridge of the metaphor. For example, in Shakespeare's Romeo and Juliet, when Juliet is called the sun, Juliet is the tenor, and the sun is the vehicle illuminating Juliet. The shared properties of brilliance, warmth, sustaining life, center of Romeo's universe, etc., form the bridge between the disparate realms: beloved humans and astronomical bodies. (Gardner et. al., 1977)

TENOR

The tenor(s) is/are the idea(s) being expressed, or the subject of the comparison.

VEHICLE

The vehicle(s) is/are the image(s) used to convey the tenor.

METAPHOR SYNTHESIZER

A metaphor synthesizer is an interpreter who accosts a metaphor, and becomes actively engaged in determining its meaning. He provides the information that has been implied in the metaphor (a tenor, vehicle or both; the relationships between tenor and vehicle). He fuses two or more disparate realms, creating a unique gestalt of the meaning.

HIGH READER

A high reader is a grade ten student scoring in the quartile above

the 75th percentile on the reading comprehension section of the Test of Academic Skills (TASK), Level II.

LOW READER

A low reader is a grade ten student scoring in the quartile below the 25th percentile on the reading comprehension section of the TASK, Level II.

III. PLAN OF THE STUDY

Eight males and eight females were selected from a high school in the Lethbridge Public School System as the subjects for the study. The sixteen students were chosen on the basis of their reading comprehension scores, half being excellent readers, the other half, poor readers.

All data were collected in April, 1979. Each student was privately interviewed so that any interference with his processing would be minimal. Each student was asked to read two poems, listen to two poems, and simultaneously read and listen to two poems that he had not previously read or listened to. After reading each poem, the subject was asked to interpret the poem and the metaphors within the poem. Each interview was tape recorded, and later transcribed.

No categorizing system was determined a priori for fear that the system might influence the results. Thus, the patterns emerged when the data were analyzed.

IV. LIMITATIONS

The following factors may have influenced the results:

1. Only poetry was examined, but the literary form might influence metaphorical processing.
2. Only short poems were used: length may influence the method of processing.
3. When listening to the poems, the students were subjected to the researcher's voice which may have influenced, to some degree, the interpretations.
4. The use of the tape recorder may have influenced student responses.
5. Only a limited number of students at one grade level were examined, limiting the generalizations that can be made. The method of processing could change at different age levels.
6. No control was made for differences in individuals according to verbal facility, other than to ask the English teachers of the students in the sample whether the subjects possessed an average or better level of verbal facility.
7. No control was made for the previous amount of instruction in metaphorical interpretation.

V. SIGNIFICANCE

Rather than focusing on the metaphor, itself, this study focuses upon the processing of the metaphor synthesizer. Such a change in perspective allows the questioning of some of the following issues:

1. What makes metaphorical interpretations unique, if indeed they are?

2. What general patterns of processing occur when subjects interpret metaphor?
    a. Do these patterns change when the metaphor is presented through a different medium of communication?
    b. Are these patterns affected by context?
3. Why do students exhibit difficulty in interpreting metaphor?

These specific insights were expected to provide general information on how any incoming data is organized, categorized, and used, to reveal how learning, generally takes place.

As well, such a study was expected to offer a number of implications for teaching, concerning:

1. how a low reading comprehender may be aided in his processing of information, specifically metaphor;
2. what kinds of materials a grade ten student might be able to process successfully, such as those evoking concrete or abstract images and relationships;
3. what kind of presentation a student prefers, whether auditory, visual or both, and why;
4. what approach to analyzing a student uses, focusing on one or two attributes or many.

Since only a limited number of studies examine metaphorical interpretation at the high school level, there is a great need for information on how students process metaphor. This need can be noted in Hunsberger's (1978) declaration that "only a small number of the most able students can respond insightfully and imaginatively to the

full impact of literary metaphor (p. 141)." Information concerning why students are having difficulty is greatly needed, especially when high school students are expected to be competent interpreters of metaphor.

This study was designed to provide some of the information. Chapter Two surveys the related literature, and presents a theoretical framework for the study. Then Chapter Three explains the experimental design, describing the instrument, the interview, the pilot study, and the treatment of the data. Chapter Four discusses the findings, illustrating the originality of the student responses, the patterns of the organizing processes, and the processing differences between high and low readers. Lastly, Chapter Five contains a summary of the results, implications for teaching poetry, recommendations for further research, and the conclusion of the report.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Studying how metaphor means might provide valuable insight into cognitive processing. Although any given metaphor may have a unique meaning for each individual because of his unique sets of background knowledge and cognitive and linguistic structures, patterns of processing may be common. Throughout the literature on metaphor, such a thread of studies is beginning to gain significance.

Many of the attempts to describe the role of metaphor in cognitive development delineate the stages of metaphorical production or metaphorical understanding by relating them to Piaget's stages of cognitive development. Since this study was restricted to a description of how literary metaphor is interpreted, only the studies examining the interpretation and understanding of metaphor will be reviewed.

In that the review of the literature on what metaphor is or how it functions was found to be controversial, a theoretical framework from out of which metaphor may be analyzed is developed in the first part of this chapter. Secondly, an overview of the empirical studies querying children's understanding of metaphor is given. Finally, the chapter provides a review of the studies that compare the effects of reading and listening upon a child's method of processing information.

I. THE THEORETICAL FRAMEWORK

DEFINITION OF METAPHOR

Because the concept of metaphor is complex, there is no one definition of metaphor. Whalley (1965) expresses the confusion:

> The nature and definition of metaphorical terms and of the relations between them have both been matter for much speculation and disagreement...the metaphorical relation has been variously described as comparison, contrast, analogy, similarity, juxtaposition, identity, tension, collision, fusion: and different views have been held regarding the nature, operation, and function of metaphor... (p. 490)

Likewise, the muddling of the concept obscures the boundaries of metaphor. Whereas metaphor for one researcher may designate all language, for another researcher it may mean an implied comparison between two dissimilar objects. The need for a clear definition to work from is, therefore, apparent.

Because the form of a metaphor may vary from "a sentence or book...to...an artistic icon, a concrete, physical model, or concrete diagram, or even a raised eyebrow"(Berggren, 1962, p. 238), the definition created for the purposes of this study will be limited to literary metaphor. A review of the existing definitions and their commonalities illustrate how the definition of metaphor crucially affects the perspective of the research, thereby influencing the methods used in identifying metaphor, and in describing the subject's competence in understanding metaphor.

COMMON CHARACTERISTICS OF METAPHOR

A somewhat global definition of verbal metaphor is provided by Whalley (1965). Metaphor is a

> condensed verbal relation in which an idea, image, or symbol, may by the presence of one or more ideas, images or symbols be enhanced in vividness, complexity, or breadth of implication.(p. 490)

This relation involves comparison of unlike things (Herschberger, 1943; I.A. Richards, 1939; Perrine, 1956; McCloskey, 1964; Altenbernd and Lewis, 1966; and Gardner, 1977); that is, "something is, or is equivalent to, something which is in most ways unlike it (Altenbernd and Lewis, 1966, p. 15)".

The commonalities of the relationship between the two disparate realms, Gardner (1977) labels ground or bridge. The ground is implied and results through a "fusion" of the two disparate realms, in that "fusion" connotes no expression of exact relationships (Stern, 1964; Charlesworth and Lee, 1964; Ramsey, 1972; Verbrugge and McCarrell, 1977). What is condensed in a metaphor, then, is the explanation of how the disparate realms are related (Hisamoto, 1975), and identifying the realms will not reveal the relationship. As stated by Stern (1964): "there is no essential identity between the two referents involved; and the relation between the two referents is not expressed"(p. 300) . Often one of the referents is not even expressed (I.A. Richards, 1939) and must also be inferred. Metaphor then demands a receptor to complete its meaning. The receptor must form a gestalt where the sum is greater than its parts.

To call the person interpreting the metaphor a receiver or

receptor implies that he is an inactive absorber of information. Thus, receptor seems an inappropriate label. From the moment the interpreter perceives the barrage of information containing the potential for meaning, he is an active producer. He selects cues which he finds meaningful, organizes them, and produces a meaning within his unique framework of background knowledge, linguistic and cognitive structures. He, as well as the creator, invents the metaphor.

In that he is actively involved in producing meaning, by fusing ideas, he might more appropriately be called a metaphorical synthesizer. Without a metaphorical synthesizer, the metaphor produced by its creator remains in limbo, making sense only when the inferred or unstated aspects are given meaning.

Ramsey (1972) describes this process of interpretation as the "is" of the metaphor. He perceives the fusion as a tangential meeting of the unrelated parts:

> the "is" of a metaphor has to be understood as a claim that (1) A and B in contact have generated a disclosure revealing some object and (2) what it is that has been disclosed demands discourse which infiltrates B into A. In this way we would explicate, for example, "Electricity is flowing in the wire", "Light is a wave motion", "Jesus is the Messiah". In each case, the copula "is" points to a disclosure whose object brings with it the possibility and need of endless novelty in metaphorical talking...a metaphor holds together two contents in such a way as to generate an unspecifiable number of articulation possibilities...Generalizing we may say that metaphorical expressions occur when two situations strike us in such a way as to reveal what includes them but is no mere combination of them both. (pp. 163 - 164)

This concept of fusion, with a resultant gestalt, necessitates a metaphor synthesizer, for a metaphor, in itself, has no power to fuse. The emphasis upon the receiver's interaction with

the metaphor seems to suggest that "specific metaphors can have different meanings for different people, different meanings for the same person, or the same meaning for different people"(Hisamoto, 1975. p. 13) . The receiver is involved in "an interchange and identification of one thing or idea with another not usually related, reshaping the thought of both to be held in mind, as if the two were one"(Miles, 1963, p. 428) . How the thought of both will be reshaped, and what tangential meeting points will be determined, will depend in part on the cognitive structures of the interpreter (Walker, 1973; Bruner, 1963; Kempson, 1977).

Understanding what metaphor is, therefore, would necessitate information about the stimulus implied relationship, the metaphor synthesizer, and the process of interpretation. The relationship is implied and condensed; the metaphor synthesizer interacts with the stimulus, and processes the implied relationships, thus forming a gestalt that causes cognitive surprise and emotion. To limit the definition to only the stimulus (or the implied relationships between unlike things) would limit the study of metaphor to what the forms of metaphor are, what the purposes of metaphor are, and how these purposes are achieved. However, including the receiver in the definition permits a study of the process of interpretation, and allows for the unique perspective of any given synthesizer within the boundaries of the context defined by the work.

Whether the synthesizer rejects the metaphor because he cannot perceive its relationships or whether he interprets it literally or figuratively may depend upon what stage of the life of the metaphor he is at.

THE LIFE OF A METAPHOR

The stage of life of a metaphor is dependent upon the metaphor synthesizer's ability to perceive the relationships between the objects being compared.

In the first stage, the synthesizer cannot relate the disparate realms. He either rejects the metaphor as meaningless and inappropriate, or he interprets it literally:

> at first a word's use is simply inappropriate. This is because it gives the thing a name that belongs to something else. It is a case of misusing words...our first response is to deny the metaphor and affirm the literal truth: "Bodies attract each other" (only people attract or are attracted, although bodies may move together)..."Metal fatigue and the cruel sea" (only people suffer fatigue and are cruel, though metals wear out after constant use, and harmless people may drown in a rough sea). (Turbayne, 1970, p. 24)

In the second stage, the synthesizer is able to perceive the relationships, and consider the <u>as if</u> nature of the comparison. Not only can he view the parts, but he can also form the gestalt, providing increased awareness:

> because such affirmation and denial produce the required duality of meeting, the effective metaphor quickly enters the second stage in its life; the once inappropriate name becomes a metaphor. It has its moment of triumph. We accept the metaphor by acquiescing in the make believe. This is the stage at which...the metaphor is used by us with awareness to illuminate obscure or previously hidden facts. This is the stage at which the metaphor, being new, fools hardly anyone.(Turbayne, 1970, p. 25)

This is the only stage where the metaphor is alive. Whereas in stage one the metaphor was denied, the metaphor in stage three no longer causes the synthesizer to react, since he no longer needs to

make sense of the unusual comparison. He accepts it and it becomes commonplace for him. Cognitively and affectively, it has died for him:

> The moments of inappropriateness are short compared to the infinitely long period when the metaphor is accepted as commonplace. The last two stages are sometimes described as the transition from a "live" metaphor to one moribund or "dead". But it is better to say that either the metaphor is now hidden, or it ceases to be one. Within this long period the original metaphor may develop in various ways, one of which is taking metaphor literally.
>
> In this part of the third stage of metaphor, we no longer make believe that camels are dogs, that sounds are vibrations, etc. Camels are now nothing but dogs; sounds are nothing but vibrations, and the human body is nothing but a machine. What had before been models, are now taken for the things modeled. (Turbayne, 1970, p. 26)

It is now used in a denotational manner, a short-hand phrase for a concept.

A specific metaphor, then, can have different interpretations merely because of the stage of life of the metaphor for the metaphor synthesizer. Langer (1957), Brown (1958), and Borges (1970) refer to the concept of metaphorical life in terms of dynamic and static. Yet, whatever the stages of the metaphor synthesizer interacting with the metaphor are called, they stress that one metaphor may be old to one person, but new to another. Consider what for many adults is a cliché: sweet tooth. When a child hears this phrase the first time, he may be puzzled. His limited concepts of "sweet" and "tooth" would suggest that the intended message was that a tooth has sugar all over it, or that a tooth tastes sweet. Through his senses, he will verify that this interpretation is incorrect. He then must reject the metaphor, because it is inappropriate to him. When he is older, he may question the metaphor again, and by using contextual information

he will associate meaning to the phrase. He may associate tooth with eating, and suddenly comprehend that sweet tooth means wishing or desiring something that is sweet, such as candy, cakes, fruits or sauces. That is assuming that the context remains within the realm of food. If, for example, he heard a man remark that he had a sweet tooth just as an attractive woman passed by, the child might interpret sweet tooth as a wish for beautiful things. In either case, when he comprehends what it means to have a sweet tooth, the metaphor becomes alive. (The cliché in such a context would also be alive for any listener who had previously associated it with food). However, soon the phrase will no longer cause questions, or have a special meaning of its own. It will become a substitute phrase meaning "a desire for sweet things". When he reaches this third stage, the phrase becomes a cliché, and is "dead" unless placed in a totally new context.

For this reason, differentiating the exact stage of the receiver interacting with the metaphor is necessary, since it will determine whether the metaphor is understood literally, figuratively, or not at all. If it is understood figuratively, it may be alive and dynamic, or dead and static. Whereas it is non-existant in the first stage, it ceases to be a creative act on the part of the synthesizer in the third stage, requiring no mental accommodation for understanding. What seems significant is that if the child were given a translation of a metaphor and told how to think what it means, he would never achieve what seems to be the most vital, dynamic stage of the metaphor: the stage where the creative mental activity personalizes the meaning. The metaphor would never really be "alive" for him: he would not have to contribute through thinking what the

phrase means. He would never have to juxtapose two or more ideas into a paradoxical relationship that would force him to extend his concepts in order to accommodate the metaphor. Although he may realize the phrase is figurative, the metaphor would remain static or "dead".

THE VEHICLE AND TENOR

In order to describe the relationship between the disparate realms in metaphor more aptly, the terms tenor and vehicle, invented by I.A. Richards, were used. However, some confusion about what these terms mean was noted. Richards used them to name "the phrase" and the "substitution for the phrase":

> ...the whole task is to compare the different relations which, in different cases, these two members of a metaphor hold to one another, and we are confused at the start if we do not know which of the two we are talking about. At present we have only some clumsy descriptive phrases with which to separate them. "The original idea and the borrowed one"; what is really being said or thought of, and what it is compared to; the underlying idea and the imagined nature; the principal subject and what it resembles or, still more simply the meaning and the metaphor or the idea and its image. (1936, p. 96)

To clarify, he described the tenor as "the underlying idea or principle subject which the vehicle or figure means" (p. 97) . Others, using his terms, have redefined them. To Barone (1968), tenor is "what the vehicle means" (p. 7), the vehicle being the word used. Leondar (1968) stressed the attitude that metaphors cannot be paraphrased or stated when he defined tenor as "the concomitant meaning conveyed by the vehicle, whether or not that meaning can be stated literally" (pp. 8 - 9) , and the vehicle as "the minimal context required to indicate the presence of a metaphor" (pp. 8 - 9) . It is ironic that I.A. Richards in his very attempt to allay confusion, provided the impetus to

perpetuate the confusion. Is the vehicle the figure, or the word used, or the minimal context indicating the presence of the figure? Is the tenor the complete meaning of the figure, or only the object of the comparison?

Thrall, Hibbard and Hallman (1960) provide a classification of tenor and vehicle that is clearly stated, and similar to the view of this author. They state:

> The TENOR is the idea being expressed or the subject of the comparison; the VEHICLE is the IMAGE by which this idea is conveyed or the subject communicated. When Shakespeare writes:
>
> That time of year thou mayst in me behold
> When yellow leaves, or none, or few do hang
> Upon those boughs which shake against the cold
> Bare ruined choirs, where late the sweet birds sang,
>
> the TENOR is old age, the VEHICLE is the season of late fall, or early winter, conveyed through a group of images usually complex in their implications. The TENOR and VEHICLE taken together constitute the FIGURE OF SPEECH, the TROPE, the "turn" in meaning which the metaphor conveys. The purpose for using metaphors can vary widely. At one extreme, the VEHICLE may merely be a means of decorating the TENOR, at the other extreme, the TENOR may merely be an excuse for having the VEHICLE. ALLEGORY, for example, may be thought of as an elaborate and consistently constructed extended metaphor in which the TENOR is never expressed. In the simplest kind of metaphors, there is an obvious resemblence that exists objectively between the TENOR and VEHICLE, and in some... the relationship between TENOR and VEHICLE is in the mind of the maker of the metaphor.(pp. 281 - 282)

This definition of metaphor necessitating the tenor and vehicle to produce the "turn" in meaning which the metaphor conveys, requires the metaphor synthesizer to create meaning, especially when the tenor is not stated. The viewpoint presented by Thrall, Hibbard and Hallman is similar to that of Perrine (1971) who extends the possible kinds of expression:

1. both literal and figurative terms may be named,
2. only the literal is named and the figurative must be inferred,

3. only the figurative term is named and the literal must be inferred,
4. neither the literal nor the figurative term is named and both must be implied.

The distinction of tenor and vehicle, and whether they are stated or implied, must be considered in studying metaphorical interpretation. As Hisamoto (1975) suggests:

> Talking about a vehicle and tenor is an improvement over talking about a metaphor, because it allows for one to be more specific about exactly what constitutes the principle meaning and what is the derived meaning. Such a distinction is necessary...because what is used as the stimulus (the vehicle or tenor) and what the child focuses upon (the vehicle or the tenor) is an important factor to consider in interpreting results. How the child interprets the metaphor is in part determined by which vehicles and tenors he encounters. How each vehicle and each tenor, in turn, affect the child's response is another important factor.(p. 26)

It is necessary to observe this interplay of vehicle and tenor, and what relations are chosen within a context to observe how processing is occurring. In the context are suggestions for meaning, but context only carries the potential for conveying a number of relationships. Which one is focused upon is dependent upon the cues selected by the synthesizer.

To assume that the metaphor could have only one meaning would constrain the potential of metaphor, and contradict the very nature of metaphorical statement, in that the vehicle, the tenor, or both may not be stated. It would be impossible to determine the exact relationship the author had in mind, unless he directly stated it. To do so would deny the active cognitive and affective discovery by the receptor, thus rendering the metaphor dead. It would deny the very attraction of metaphor: its ambiguity that provides for a one-to-many

relationship (Royce, 1967) capable of producing one or a multiplicity of meanings:

> as the physically invariant pattern is taken to represent different conceptions, the subject aesthetically, imaginatively restructures the pattern so that a relationship of "fittingness" obtains between vehicle and referent; the external one-many relationship turns out, from the point of view of the subject engagé, to be a one-to-one relationship.(Kaplan, 1962, p. 84)

However, a receptor could perceive many one-to-one relationships from the same context, if the tenor or vehicle has been implied.

Studying his process of providing one or more of the disparate realms, and relating them "might reveal what the individual is doing when he implies a relationship of fittingness between vehicle and tenor" (Hisamoto, 1975, p. 31) To restrict his environment in any way by, for example, providing both vehicles and tenors, limiting the amount of context, inferring that some responses are better than others, or by limiting the communication medium, might restrict or otherwise affect, the processing used by the metaphorical synthesizer.

A CLASSIFICATION OF METAPHORICAL RELATIONSHIPS

Most of the studies, in their attempts to classify the tenor-vehicle relationships, do not consider how the relationship is viewed by the metaphor interpreter. This limited perspective restricts the use of their classifications to a discussion of the form a metaphor may possess.

Brooke-Rose (1958) considers only the noun metaphor, and concerns her classification with what may be stated and what implied, as did Perrine (1971). The classification of Brooke-Rose (p.24-25) reiterates that the meaning of the tenor may be dependent upon the

receiver's background experience and his his selection:

1. Simple Replacement: the proper term is replaced altogether by the metaphor, without being mentioned at all. The metaphor is assumed to be clear from the context or from the reader's intelligence.
2. The Pointing Formulae: the proper term A is mentioned, then replaced by the metaphor B with some demonstrative expression pointing back to the proper term (A...that B). This can be a very subtle formula, rather like a syllogism.
3. The Copula: a direct statement that A is B, which is authoritative in tone and even didactic. It is so direct that it can be used for highly original metaphors or paradoxical equations, and seems wasted on the trivial. It can be varied in many ways, and includes more timid or cautious forms such as to seem, to call or be called, to signify, to be worth, to become.
4. The link with "To Make": a direct statement involving a third party: C makes A into B.
5. The Genitive (in the very wide sense of provenance form): this is the most complex type of all, for the noun metaphor is linked sometimes to its proper term, and sometimes to a third term which gives the provenance of the metaphoric term: B is part of, or derives from, or belongs to, or is attributed to, or is found in C from which relationships we can guess A, the proper term (eg. the hostel of my heart body). The complexity of the type is partly due

> to the fact that the same grammatical links (chiefly of...) are used to express many different relationships, even the identity of two linked terms: eg. in the fire of love, love is the fire, there is no replacement, no proper term to guess: the genitive is purely the appositive.

Whereas Brooke-Rose's method of classifying relationships clarifies the structure a metaphor may assume, it offers little to the semantic processing a metaphor synthesizer employs when interpreting metaphor.

Neither does the use of linguistic markers such as + Animate, + Use, or - Abstract found in classifications by Katz and Fodor (1962) or Barone (1968) reveal insight into the cognitive and affective processing of the synthesizer. Barone acknowledges the limitation of his classification:

> We are still a long way from understanding exactly how a metaphor works, but at least we are moving somewhat closer to an understanding of what a metaphor is.(p. 12)

Linguistic markers could conceivably be used in describing what kinds of relationships a receptor may prefer in his synthesizing of the meaning, or in the kinds of relationships he rejects, but emphasis would then have to be placed upon how the individual interacts with the metaphor. To attempt to describe a metaphor using linguistic markers without considering the metaphor interpreter would seem impossible. At most only the tenor or vehicle could be described if it were stated explicitly in the work.

To Upton (1961), "Meaning...is what goes on in the brain when it makes a thing or connection between two or more things"(p. 31) .

The context of the vehicle can obtain many relations to the context of the tenor. Which is chosen is dependent upon the interpreter:

> Meaning is always a matter of relation. Nothing ever means itself alone; it can only be meaningful to somebody about something else. Meaning, then, is simply a function of the cortex in action; it is what goes on in a brain when it makes a thing or connection between two or more things. We might say that meaning is the "stuff" of consciousness...a unit of meaning...that is, a meaning that cannot at the moment be practically broken up into two or more lesser meanings...it is made of a thing and the relation which connects it to another thing.(pp. 30 - 31)

Upton attempted to classify the relations of similarity calling them similitudes, and concerns himself with how the parts relate to the whole. The "whole" for Upton is the overall structure and the parts are the elements of comparison within that structure. He attempts to note how the tenor and vehicle are related in terms of structure or compared actions or events. The vehicle and tenor both have universal contexts; in essence each is a genus and what aspects (or species within the genus) chosen from each to be related are determined by the interpreter. Although Upton places a greater emphasis upon the relationship between vehicle and tenor noted by the metaphor synthesizer, he fails to mention that sometimes the universal contexts must be determined by the receptor as well, before he can determine what aspects of these concepts will be related or in what ways; however, his stressing of <u>unique</u> meaning for a synthesizer does emphasize the significance of the interpreter in metaphorical interpretation.

Stern's (1964) classification of similarities in relationships between nouns, verbs, etc., is rather unwieldy, because of its huge numbers of classes and sub-classes. However, he does contribute in

terms of what the common element in a relationship might be:

> ...for the nouns...the similarity may refer to (1) the appearance, (2) the qualities, functions, activities, or (3) the perceptual or emotive effects of the referents. (p. 314)

The problem lies in its assumption that the relationship between a given vehicle and tenor would always be classified in the same way. In this sense, Stern seems to disregard the unique contribution of the interpreter, or the life of the metaphor.

Black's (1962) interaction view of metaphor classifies beyond a substitution or comparison view. He refers to a new context (frame of the metaphor) that imposes an extension of meaning. The thoughts generated by the vehicle and tenor are active together, interacting to produce a resultant meaning. The reader, being forced to connect the two ideas (Richards, 1936, p. 125), must use a system of associated common places to construct a corresponding system of implications about the tenor. As a result, he suppresses some of the details while emphasizing others and thereby provides organization for semantic meaning:

> The effect of (metaphorically) calling a man a "wolf" is to evoke the wolf-system of related commonplaces. If the man is a wolf, he preys upon other animals, is fierce, hungry, engaged in constant struggle, a scavenger, and so on...A suitable hearer will be led by the wolf system of implications to construct a corresponding system of implications about the principle subject...Any human traits that can, without undue strain, be talked about in "wolf language" will be rendered prominent, and any that cannot will be pushed into the background. The wolf metaphor suppresses some details, emphasizes others - in short, organizes our view of man. (p. 41)

The processing of the interaction between the cues selected would be influenced, though, by the various interactions between these cues and those from the larger context. They could partly be

determined by the interpretation of a previous metaphor. Black, in recognizing that "in a poem...the writer can establish a novel pattern of implications for the literal uses of the key expressions, prior to using them as vehicles for his metaphors"(1962) overlooks the significance of this overall context especially in poetry. Nowattny (1962) draws attention to the significance of the overall context:

> ...in ordinary discourse we expect that the discourse will hang together in one main way, that what it means as a whole will come to us if we see its ground plan...in poetry the ground plan is only one element in a larger organization... by virtue of which we derive from the poem as a whole a verbal experience more exciting than, and not reducible to, a reiteration of a common idea...What in ordinary discourse is the highest level of organization - the hang of utterance - is in the poem, only one level; the poem hangs together this way but also in other ways as well. Within the very particulars which clothe the ideogram (sic).(p. 82 - 83)

It is conceivable that the organizing force of the macro-context upon the micro-context within any given metaphor could influence the relationships noted in the metaphor. What may be of consequence is how the combination of unique relationships perceived throughout a work would interplay to render almost any poetical interpretation unique.

While Black does not offer a classification in the sense of kinds of interpretations a receptor may make, he does lay the ground plan - the need to study the interpreter: what details are emphasized, which are suppressed in finding common places and in making implications.

Hisamoto (1975) has pioneered the classification of interpreters' responses. Her classification is a range of responses upon which specific metaphors can be placed. It is an attempt to classify the forms of organization used in the process of interpretation.

Crucial to her classification, though, is her argument that one metaphor may be found on any spot of the continuum. Where it is placed will depend upon the receiver's perception of it. This seems to be the only classification that allows for a change in meaning of a metaphor depending on its stage of life for the receptor. It allows metaphor to come alive, and is an exciting development in the study of metaphorical interpretation. Thus, one metaphor has the capacity to be all things in the classification: it contains the potential for a multitude of relationships. Which relationships and what kinds of relationships it will have will be dependent upon the receiver. It allows the metaphorical characteristic of ambiguity, that provides the delight in the receptor.

In her classification, the contexts of the vehicle and tenor may possess relationships that are physical, functional, connotative or classificatory, that overlap, are embedded, or categorized, or contained in analogies. Three major types of relationships are proposed:

1. the tenor and vehicle resemble each other physically, having either a one-attribute or two-attribute (linked) resemblence. The relationships are concrete and physical.
2. the tenor and vehicle are compared by one or two functions, by three linked physical attributes or by a combination of a functional quality with a physical attribute. Though these relationships are basically concrete and tangible, they have more than two physical attributes, or one or two functional

attributes, or a combination of a functional physical attribute.

3. the tenor and vehicle are related through a combination of three linked physical and functional attributes, an embedded relationship, or categoric or analogic relationship, and any combination of an embedded, categoric or analogic relation. In general, abstractions and complex relations can occur; the vehicles and tenors are not tangible and can be undifferentiated and diffuse possibly involving generalizations based upon several classes that are embedded.

These types represented what Hisamoto believed to be stages of difficulty and complexity of interpretation. Her study, however, was based upon specific examples of isolated metaphors. Whether children's responses could be classified into these three types when metaphor is within the context of a work has not been established. It does, however, bring the metaphor receiver and his relationship with a metaphor into focus.

METAPHORICAL SYNTHESIZING AS AN ORGANIZING PROCESS

The previous sections within the theoretical framework attempted to explain that in producing the meaning for a metaphor, the interpreter must often produce a vehicle, tenor, or both, and through association, determine the relations between them. These relations, or ground of the metaphor, would be used to determine the meaning of the metaphor. This section describes what the interaction of an individual with a metaphor might be like.

If "meaning is always a matter of relation"(Upton, 1961, p. 30) the metaphorical process may be similar to the general cognitive processes outlined by Piaget and Bruner. Cognitive processing involves the formation of new categories of thought and metaphorical interpretation. In fact, "metaphoric effectiveness - the combining, reshuffling and rearrangement of existing frames of reference" or "connecting domains of experience that were before apart" (Bruner, 1962, pp. 19 - 20), are interpreted by Bruner as conditions of creativity:

> What we are observing is the connecting of diverse experiences by the mediation of symbol and metaphor and image. Experience in literal terms is a categorizing, a placing in a syntax of concepts. Metaphoric combination leaps beyond systematic placement, explores connections that before were unsuspected.

Metaphorical synthesizing may be a necessary condition (or perhaps stage) of cognitive growth, "since mental growth involves the formation of new mental structures." (Elkind, 1969, p. 327)

Possibly Piaget's stages of cognitive growth would then apply to an interpreter's processing of metaphor. The occurrence of rejection, assimilation and accommodation in attaining equilibration (Hall, 1970) are suggested by a number of researchers.

In interpreting metaphor, the synthesizer feels a form of tension caused by the figurative language suggesting a message that seems to contradict an implied message (Percy, 1958, p. 81). The interpreter is shocked, reacting emotionally with tension but also with intellectual arousal (Anderson, 1964; Hisamoto, 1975). In order to reduce the tension and arousal, he must explore the possibilities, and find meaning:

Tenor and vehicle are widely divergent, their resemblances

> minimal; and this operation generates a powerful tension. The very absurdity of the literal content thrusts into prominence the potential secondary meaning ... By providing a principle of selection, the figure itself directs his search, but to find its meaning he must look beyond it to the environment, to a physical event or a verbal explanation.(Leondar, 1968, p. 145)

One factor influencing this process would be individual differences in cue selection. The Semantic Potential Theory of Language (Fagan, 1978) argues that language contains the potential for the construction of meaning, and a limited number of cues are selected by the receptor, from which he "reconstructs" or produces meaning. In a sense, what cues are focused upon provide a framework for the interpretation. This form of "screening" or "filtering" (Black, 1962) defines the interaction a receiver will have with a metaphor, his perspective created through his background experiences acting as a filter for the cues he chooses:

> Well, what does a filter do? It allows some things to pass, disallows others. It organizes the things which pass through it in some sort of systematic fashion. It selects some things over others. It rearranges things. (Swanson, 1966, p. 306)

Because these cues can be related in many ways in metaphorizing, the "rearranging of ideas" could be a unique process for every receptor. In this way, metaphorical interpretation would guide the interpretation of a work, but not confine the interpreter to one meaning:

> ...metaphor when used as a sentence does not contribute to whatever directly informative use that sentence may have but rather serves to put the hearer in a position to explore and find out new things...It allows him to look rather than describing for him what there is to see...A...metaphor supplies a conceptual map that allows the mind to range freely over a complex of concepts some of which it shifts to the objects mapped, and to use a perspective metaphor is to show such a map rather than to describe what is mapped...a literal description gives the object piecemeal with the gestalt loss while the metaphor gets closer to the gestalt by directly presenting the organizing icon.(C.M. Myers, 1968, p. 163)

The interpretation of each metaphor would then seemingly influence the interpretation of another metaphor, and all would have the potential to influence the meaning of the complete work.

A second factor involved in metaphorizing would be the process of comparison between the known and unknown. Verbrugge and McCarrel (1977), in noting that the ground of the metaphor was a very effective retrieval cue, suggested that the metaphorical process does require a comparison and categorization of the context of the vehicle and the tenor. Using his sense of shared commonalities (Black, 1962), the receptor synthesizes meaning. If the juxtaposition of tenor and vehicle produce previously unthought of similarities, creating a unique interpretation, the receptor will react with pleasant shock. He will accommodate by forming a new mental structure or by assimilating the new concept into a previous category. If the juxtaposition, however, does not cue any kind of relationship, the metaphor will be rejected or understood literally.

Because metaphorical interpretation demands the crossing of categories, likely only temporarily, the receptor becomes engaged in "going beyond" his normal categories stored in his long-term memory. Miles (1963) illustrates this active processing through the following example:

> Metaphor trades upon common rather than uncommon word association patterns. So as an apple is associated with fruit, pumpkin may be with vegetable, and so, by their relative positions in their classes, we could call pumpkin the apple of vegetables - not a very enthralling metaphor but one that makes the point by its very dullness.(p. 158)

Given this example, a receptor could, through a temporary overlapping of classes, accommodate the new meaning by forming a new category. Or

he could recategorize one of the classes into the other - a form of embedding, so that the pumpkin would now be considered an apple, or the apple a pumpkin, the apple a vegetable, or the pumpkin a fruit. Assimilating the concept would alter one of the existing categories, rather than accommodate through forming a new one, by finding the ground of the metaphor that indicates in what ways the tenor and vehicle are alike.

It is possible, then, that there are stages of metaphorical interpretation just as there are stages in the life of the metaphor for the receptor. It seems that when the relationship cannot be noted, (or when it no longer causes cognitive puzzlement) rejection of the metaphor occurs. When the various relationships existing between the contexts of the tenor and vehicle can be compounded, accommodation occurs. But possibly, a developmental stage located between these two involves assimilating one class into the other. Hisamoto (1975) proposes that a child may perceive metaphor differently from an adult, in that the child may grasp at a relationship which is global and undifferentiated, embedding it into his final interpretation of the meaning of the metaphor. Just as the child uses metaphor to help bridge the formation of categories, he may use assimilation as an initial step to differentiation. To quell this stage might be hampering the developmental growth in understanding metaphor, for a mature metaphorizer could conceivably note the similarities as well as the differences in the objects compared.

The comprehension of a metaphor would necessitate restructuring, recombining and reshuffling of mental structures. Synthesis must occur, in order to expand upon the information condensed in the metaphor

and to produce meaning. This process of synthesizing seems to be the problem-solving procedure used in the discovering or forming of new ideas (Farber, 1950; Bruner, 1962; Black, 1962; Bonner, 1963; Schon, 1963; Koestler, 1964a, 1964b; Murray, 1972). Thus, metaphor can be perceived as an organizing process.

THE SIGNIFICANCE OF CONTEXT IN INTERPRETING METAPHOR

Smith (1973) concluded that students who attended to context were better interpreters of metaphor. In fact, most studies on context stress the importance of context. Ushenko (1955) and Brown (1958) found metaphorical interpretation dependent upon context. Black (1962), Reinsch (1972) and Hisamoto (1975) suggest that context limits the kinds of interaction an interpreter may have with the metaphor in that it suggests the points of meeting between tenor and vehicle. Hunsberger (1978) reiterates this need to consider context: "which common places are associated and appropriate depends in part on the context (p. 25)".

However, how much of the context of a work is required is a point of contention. Most studies consider only the frame of the metaphor to be sufficient context. Yet, Verbrugge and McCarrel (1977) point out that the difficulty of processing a metaphor may be related to the amount of given context.

It is possible that the complete work is the only sufficient amount of context required for the interpretation of the metaphor. Consider Ortony's (1977) argument that a literal statement would be a metaphorical statement if placed in a particular context. His example, "the troops marched on" used to conclude a paragraph describing an unruly class damaging a room, changes from a literal meaning to a

metaphorical meaning. Perrine (1971) also suggests that metaphors having only the figurative term named (vehicle), requiring the literal to be inferred, depend upon the larger context for cues to indicate a metaphorical reading. In an allegory, such as Galsworthy's "A Novelist's Allegory", the whole work with its interacting relationships must be considered in determining the interpretations of the metaphorical statements.

Nowattny (1965) believes the larger context beyond the framework of the metaphor to be crucial because "metaphor has the power to draw special effects from the interplay of metaphor". Perrine (1971) notes that within a work, an extended series of subsidiary metaphors may imply a controlling metaphor of which the subsidiary ones are all part. For example, Shakespeare's

> All the world's a stage
> His act being seven stages...

uses an interplay of metaphors in comparing life to a play. None could be considered in isolation, since they interact creating special effects.

Furthermore, in that language is more highly structured in poems, context may play a more significant role in poetry than in other forms of writing. "In a poem...the writer can establish a novel pattern of implications for the literal uses of the key expressions, prior to using them as vehicles for the metaphor" (Black, 1968). Black's comment reiterates Nowattny's argument (which was already quoted) that there is a higher degree of organization found in poetry than can be found in ordinary discourse. The poem may produce meaning beyond the mere stating of the idea which is the highest level of organization in ordinary discourse. The poem is organized in many ways "within the

very particulars that clothe the ideogram" (p. 83). To narrow "the particulars which clothe the ideogram" would restrict the possible relationships existing between tenor and vehicle, between metaphor and metaphor, and between metaphor and the whole interpretation.

II. STUDIES ON THE PROCESSING OF METAPHOR

UNDERSTANDING METAPHOR

Richardson and Church (1959) examined how children, ages seven to ten and twelve to fifteen responded to common proverbs. They categorized the strategies used by the children into three forms of responses:

1. specific-general response where a general statement or concrete specification was given;
2. literal-figurative, where either a literal, a mixed literal and metaphorical, or metaphorical response was made;
3. physiognomic, in which the response was dominated by a single term.

On the basis of this study, Richardson and Church suggested that a developmental pattern in metaphorical interpretation existed:

1. the mean correct definition of the proverb increased with age;
2. the general statements and metaphorical responses increased with age;
3. the literal responses decreased with age.

A pattern in the understanding of metaphor was also noted by Asch and Nerlove (1960) in their classic study. They examined the

ability of children (age 3.1 to 12.1) to interpret double function terms. They found little awareness of the psychological meanings of these adjectives in children younger than age six. Seven and eight-year-olds often understood the psychological meanings, but they had difficulty in formulating a connection between the psychological and physical senses. A number of children felt that the words were entirely different and had no connection with one another. A greater sensitivity to psychological meanings and connections with the physical were shown by the nine to ten year olds, but when probed, these subjects showed little awareness of the dual functions of such terms. Only the oldest subjects could pinpoint the connections between the domains. Asch and Nerlove concluded that:

1. physical meanings of dual function terms are first appreciated;
2. mastery of psychological terms emerges only in the middle years of childhood;
3. dual property of terms is realized last, and often only with prompting.

Gardner (1974) asked children (ages 3½ - 19) to use terms that were usually applied in one sense modality to refer to another. He noted significant differences in metaphoric associations across ages, but not by sex. He noted that:

1. preschool children often gave irrelevant answers or no answers at all;
2. seven year olds gave reasons that were concrete and subjective;
3. eleven year olds gave variable, but generally more relevant answers;

4. college students gave the most answers and the most variety of reasons.

He stated that, although the task performed by the subjects was simple, this same pattern would exist across the ages for other forms of metaphor as well.

Lesser and Drouin (1975) verified Asch and Nerlove's basic findings but also suggested that tactile referents (e.g. warm) are understood earlier in a dual sense than words with visual referents (e.g. bright).

Kogan and his collegues (Kogan, 1975, 1976) compared children's ability to respond to sets of pictures which could be classified on the basis of a conventional superordinate category (a bird and a plane are both flying machines) or a metaphoric (an aging man and a low flame are both dying). He noted that as children reached pre-adolescent years, they could better form the metaphoric link.

Using similar picture sorting techniques Winner, et. al. (Winner, Kraus and Gardner, 1975) observed an increasing ability, with age, to group pictorial sequences on the basis of a similar metaphoric concept. A building beginning to burn, and growing into a raging fire would be grouped with two people beginning to argue and having a furious physical fight. They also noted an increasing ability to match an appropriate picture to a verbal metaphor such as "he has a very heavy heart".

The ability to paraphrase metaphor is noted in Wynn's (1970) study. She found that semantic anomalies and metaphors drawn from literature were interpreted similarly. In over one half of the paraphrases the noun was interpreted literally, and the verb and

adjective metaphorically, perhaps suggesting, she thought, that nouns are most often tenors, and verbs and adjectives the vehicles bringing the figurative meaning. She suggested that the interpretation of the adjective focuses on physical relationships, and those of the verb on the functional relationships between vehicle and tenor.

Billow (1975) focused on kinds of metaphor in measuring children's capacities to paraphrase metaphor. He asked the children to interpret similarity metaphors (ones equating two similar terms, such as "hair is spaghetti") and proportional metaphors (ones involving an analogical relationship among four terms, one of which must be inferred, such as "my head is an apple without a core"). He noted that the ability to understand similarity metaphors emerges first and is correlated with the acquisition of concrete operations. Proportional metaphors, requiring analogic thinking, were only understood at pre-adolescence. He also suggested that some preoperational children solved similarity metaphors on an intuitive basis, and that metaphoric understanding was aided only slightly when the metaphor was illustrated pictorially.

Winner, Rosenstiel, and Gardner (1976) had subjects aged six to fourteen paraphrasing metaphoric sentences. Again developmental aspects were noted:

1. subjects aged 6 - 7 used either a magical approach or tended to juxtapose the two elements into a plausible but unmotivated sequence;
2. 8 - 9 year olds realized that a direct comparison was needed but were unable to equate the inanimate and animate properly, and instead cued on a physical feature

of the animate object;

3. 10 - 11 year olds appreciated the dual function and understood the topic of consideration;
4. but only the adolescents could compare reliably on a variety of dimensions (for example, stubborn, unyielding, stern, cruel, set in his ways).

These studies requiring verbal paraphrasing were, perhaps, more difficult than those using an indirect approach. The following studies suggest that metaphoric competence occurs earlier than the pre-adolescent years when metaphoric matching is used.

Gardner (1974) found that pre-school subjects were able to match pairs of adjectives with pairs of elements drawn from several sensory domains (two pitches, two colors, two faces, etc., with the hard one, the soft one, the light one, etc.). They grouped these in the same way as did adults.

Gentner (1976) concluded that pre-school children could map one domain onto another remote one as successfully as adults could (for example, on a picture of a mountain they could designate loci corresponding to nose, feet, etc., preserving spatial relations).

Milchman and Nelson (1976) found that even four-year-olds could group objects and interpret pantomimes in a metaphoric way, but that the capacity to produce symbolic interpretations improved with age.

These studies may be significant in that they suggest that sensitivity to metaphor may be present far earlier than most researchers thought. This sensitivity is noted, however, when the children are given simpler tasks and response measures, as well as

generous criteria for competence. When more stringent criteria such as paraphrasing or explanation of the rationale of the metaphor are required, sensitivity is found later; even college students experience difficulty in paraphrasing complex metaphors (Richards, 1935; Vayo, 1977).

Few studies have probed the relationship between metaphoric competence and other cognitive capacities, and the results of the existing studies are controversial. Billow (1975) noted a relationship between the operational level and the capacity to understand specific types of metaphor. Malgady (1976) and Burt (1971) found a relationship between the capacity to interpret similes and the students' I.Q., reading and academic scores. On the other hand, Kogan (1975), and Winner, Kraus and Gardner (1975) discerned no relationship between a tendency to make metaphorical groupings and I.Q. scores or other achievement scores.

Milchman and Nelson (1976) concluded that children's abilities to interpret figurative language was not strongly linked to their ability to reason logically. Yet, Gardner, et. al., (1977) believes that such results may be due to the standard psychological tests that are used which may not measure the intellectual factors involved. The linguistic and cognitive capacities which seem to emerge in the pre-adolescent years, and which seem to generate thinking beyond a literal, concrete interpretation require more study (Winner and Gardner, 1977). There is a further need to identify what prevents a non-comprehending child from interpreting metaphor.

Another area of study related to metaphorical understanding is the influence behavior might have on a child's desire to interpret metaphor. Winner, et. al., (1976) noted that subjects between pre-

schoolers and college students frequently resist attempts to use figurative language. Billow (1977) observed a decline in the use of spontaneous metaphor in the early school years and Pollio and Pollio (1974) noticed that few metaphors could be found in the written compositions of students in the upper elementary grades. Rosenberg's (1977) findings concur in the reluctance of the primary grades to use figurative language.

It is to be observed, though, that around age ten subjects rapidly begin to produce acceptable figures of speech (Silverman, Winner and Gardner, 1976; Winner, 1975). The rejecting of figurative language may be caused by the child passing through a literal stage when he is consolidating literal meanings of words and community definitions of categories. Metaphorical meanings may interfere with the amassing of literal meanings (Gardner, et. al., 1979).

Although these studies concern primarily the production of metaphor, they would seem to have implications for the understanding of metaphor, as well. If at adolescence, a gradual rise in the use of figurative language occurs (Gordon, 1961), studies observing how metaphor is processed may be most productive after these adolescent years.

RELATIONSHIPS AMONG METAPHORIC OPERATIONS AND THE DEVELOPMENT OF METAPHORIC COMPETENCES

Though a comprehensive theory of metaphoric development seems premature, Hisamoto (1975) has attempted to provide such a model of the organizing process used in interpreting based upon elementary students' range of responses. Yet, the work of Asch and Nerlove (1960),

Elkind (1969), Gardner (1974), and Winner, et. al., (1976) suggest that the development of a metalinguistic capacity during the adolescent period may affect children's processing. Gardner, et. al., (1977) outlines a trajectory of metaphoric development:

1. Pre-school years
    1. Children are most actively involved in apparent metaphoric production.
    2. This may be due to their meagre vocabulary which forces them to over-extend the use of a word.
    3. Their re-namings at first seem based on functional or exactive connections; then perceptual attributes, particularly in the visual realm. By the time of school they can make synthetic connections drawing upon one or two perceptual modalities. Also, their metaphoric links are couched in explicit syntactic frames.
    4. They cannot paraphrase or appreciate the metaphors of others and cannot explain the rationale underlying communally-based metaphors.
    5. They seem to have a kind of intuitive understanding of the processes whereby domains are mapped one to another.
2. Early Primary School Years
    1. Children exhibit literal usage in their own speech and a strong preference for literal expressions, when given a range of figures to choose from.
    2. Comprehension is tied to the literal: they will

resist comparisons cutting across established boundaries.

3. This may be a valuable step of progression since it may be that a metaphor can be comprehended and appreciated only after a child understands the common meaning of a word, and how words are usually organized into a pattern.

3. Pre-adolescent Years

1. There is a rebirth of interest in the metaphorical domain. The child can now go beyond the literal, using words in ways not usually countenanced but which, in certain contexts, are appropriate and illuminating.
2. Even though the child may not be able to detect the intended linkage, the general idea is communicated.

4. Adolescence and Beyond

1. Perhaps only with the attainment of formal logical operations does a flowing of metaphoric capacity occur.(Elkind, 1969; Inhelder and Piaget, 1958)
2. The child can classify objects in a variety of ways, reflect upon language as an object, and deal not only with the given objects of the present but also with a universe of possibilities.
3. He is no longer restricted to a single comparison, nor to an approximate understanding of a metaphor.
4. He can appreciate a variety of links between domains and offer a detailed paraphrase of the metaphor.
5. With or without prodding, he should be able to

> illuminate the nature of the metaphor, the reasons why the comparison works, and the underlying conceptual and linguistic links in a particular instance.

Gardner stresses that investigations of these forms of competency have yet to be undertaken, and that subjects would probably differ widely in their capacity to perform these tasks. While performance on a battery of tests might prove to be low (Hunsberger, 1978) the scattered evidence does suggest that the potential to understand, produce and explain metaphor is present at adolescence.

The need to examine why children at this level cannot interpret metaphor is suggested by research which claims that metaphoric capacities are essential to finding new solutions (Ghiselin, 1955; Bruner, 1962; Getzels and Jackson, 1962; Schafer, 1975). Attempts to train metaphoric competence has only met with moderate success (Gordon, 1961; Lesser and Drouin, 1975; Connor, 1976; Gamlin, 1976; Silverman, Winner and Gardner, 1976). Information is badly needed.

Some information on metaphoric competence at the high school level has been provided by Hunsberger (1978). She observed that neither high nor average comprehenders could correctly interpret the figurative parts of the passages with consistency. However, the higher comprehenders made fewer errors, using the print as the basis for their inferences, whereas the average comprehenders tended to confabulate more. While the average readers seemed less organized, noticing fewer interrelationships, the high comprehenders tended to balance their attention to the context and the metaphor.

III. STUDIES ON THE DIFFERENCES BETWEEN READING AND LISTENING

Two principles of information processing may be affected by a change in the mode of communication. The principle of cue selection is that all sensory information confronting a receptor is not processed. That the total information is not utilized is stated explicitly or implicitly in the models of human processing (Biggs, 1969; Sperling, 1970; Norman and Rumelhart, 1970; and Fagan, 1978).

The second principle of information processing is that meaning is created (or re-created) from the partial information received. The receptor is involved in a constructive rather than passive activity. Neiser (1967) uses the analogy of the paleontologist who uses a few bone chips to reconstruct a model of a dinosaur (p. 94) to illustrate the reconstructive nature of cognition. Bruner (1957), as well, emphasizes the need for the receptor to go beyond the information given.

Both of these principles seem to apply to the superordinate class of language processing as a whole (Walker, 1977). Support for this view of speech perception is noted in the work of Neisser, 1967; Chomsky and Hallē, 1968; and Hochburg, 1970. The listener, who is able to use phonological, semantic and syntactic redundancies in a language, samples the input and reconstructs the intended message, using his own knowledge of language and his experience of the topic as well. The listener is so able to reconstruct meaning in this fashion that he hears words or ideas that were not in the input at all (Neisser, 1967, p. 167) and chunks surface meanings into workable deep structures (Bransford and Frank, (1971) that can be stored sufficiently in long-term memory, not even aware that he has done so.

In reading, the same principles seem to apply. Goodman (1970) states that reading is a psycholinguistic guessing game. Kolers (1970) and Smith (1971) agree that meaning can be reconstructed without faithful reference to surface structure cues.

If communication is not a precise exchange of information, and if words are merely triggering devices for meaning, meaning ceases to be fixed: "There are literally an infinite number of reader responses" (Gage, 1971, p. 12) . Walker (1977), however, points out that infinite does not mean any: the receptor is constrained by the language cues used by the writer or speaker. Whether he processes these cues in a similar fashion has generated a number of studies.

Some studies have found correlations between these two receptive skills, but the results are controversial. Jester (1966) noted correlations between .25 and .80 whereas Spearitt (1962) found a correlation of .5 to .6 at the upper elementary level, and higher correlations at the high school level. These studies may suggest that the difference in the communicative mode may have little effect at the high school level. On the other hand, how these skills differ, may present important information.

Caffrey (1955), Caffrey and Smith (1956), Spearitt (1962), and Longchamp (1971) all argued that a definite listening factor exists, but Petrie (1964) counter-argues that the use of tape recorders influenced their results. He further stated that the high correlations discovered between reading and listening occurred because written language served as a common input, and that a drop in correlation might occur if spontaneous speech were analyzed.

Fagan (1978) confirms the difference between the oral and

written code of language. He suggests that language contains the potential for the construction of meaning, and that the code of presentation seems to influence the informational cues presented to the receptor. If the reader also processes the cues differently, as suggested by Walker (1973), the effects of these mediums might influence the processing of metaphor.

Jones (1970) found that when plays were presented with and without oral accompaniment to fourth grade children, oral reading accompanying the silent reading resulted in slightly greater gains in character imagery and in total imagery than did silent reading. On the other hand, environmental imagery was enhanced significantly by silent reading. No differences existed between the two methods of presentation in comprehension scores, clarity of images, interest in the plays, or vocabulary or idiomatic measures. Also the relationships between imagery scores and comprehension scores were found to be low.

Brassard (1970) attempted to design a test that would give equivalent measures of the reading and listening comprehension of grades four, five and six. She concluded that listening comprehension was statistically superior to reading comprehension at these grade levels, but the differences between the two decreased at each successively higher grade level. She also noted that reading comprehension had a higher correlation with listening than with I.Q., mental age, or sex. Students with high verbal I.Q. scores had slight differences between listening and reading, whereas those with high quantitative scores were superior in listening comprehension.

Mullally (1972) noted that listening comprehension declined for primary grade children as speech is compressed (ranged from 138 w.p.m.

to 345 w.p.m.). He also stated that no significant interaction between reading achievement and word compression rate was found.

Markert (1974) attempted to examine the relationships between reading comprehension and listening comprehension among second graders. When reading and listening scores were compared for the lowest third in reading ability and the lowest third in intelligence, the subjects scored significantly higher on the listening comprehension test. In the highest thirds in intelligence and reading ability, no significant difference was found between modalities.

Walker (1975) questioned whether the two are distinguished by differences in comprehension process, or whether comprehension is a function of language processing as a whole. He hypothesized that cue selection and message reconstruction in reading is a more precise process resulting in meanings more congruent with those intended by the writer (how he measures this, he does not state) than the same process in listening to spontaneous speech. A significant criticism he makes of many of the studies is that the kind of listening involving reading written material read aloud may emphasize similarities rather than differences between reading and listening. He found that the differences lay in the process of cue selection and message reconstruction. His conclusions were that the impact of information from other than input cues was more influential in listening than in reading; that when reading, meaning constructions were more tightly constrained by cues in the text, and that reading offered a greater precision in communication

Mosenthal (1976) concluded that reading sentences aloud gives access to linguistic competence different from silent reading and listening.

Guthrie and Tyler (1976) found that, while a difference between good and poor readers was significant in reading comprehension, there was no difference in listening comprehension when single sentences were used. Their poor readers, though, were older and the good readers might score higher than poor readers if they were the same age.

Although the kinds of relationships existing between the listening and reading of metaphor in poetry would reveal how metaphor can best be presented, no such studies have been found.

CHAPTER SUMMARY

The presentation of the review of literature served two major purposes: it outlined a theoretical framework from which metaphor will be analyzed, and it reviewed the literature pertinent to the present study.

The interpreter of metaphor was perceived as being as productive as the creator in determining the meaning of a metaphor. It seemed more appropriate to call him a synthesizer rather than a receptor because of his active involvement in producing meaning through a fusion of disparate realms.

The observation of the metaphorical process used by a subject may be affected by the stage of life each metaphor has for each individual, and by the amount of context surrounding the metaphor. Only stage two metaphors allow active, personal involvement in the interpretation. To observe the personal processing of each individual, this stage of metaphor should be presented, and each metaphor should be presented in the complete context of the work. Since reading or listening may influence processing, their effects should be studied.

The review of literature presented a controversial view of metaphorical processing. That stages do exist was widely held, but what the stages are was insufficiently argued. What roles metaphor plays in the cognitive process or in what way it resembles general cognitive processing requires further information, the present studies conflicting in their reports.

Lastly, how metaphorical processing may be viewed as an organizing process was suggested. This study will extend the present information on metaphorical processing by observing how the presentation of metaphor through different communication media may affect the organizing process of each individual and, therefore, his interpretation of the metaphor and the work. The researcher posed the following questions from out of which the design of the study arose:

1. How will the organizing patterns used by high readers differ from those used by low readers when they interpret metaphor in poetry?
2. How will the medium of presentation affect and alter the organizing processes used by both high and low readers when processing metaphor?

CHAPTER 3

DESIGN

This chapter describes the sample, the observation instrument and its administration, the pilot study, and the treatment of the data.

THE SAMPLE

The sample consisted of eight males and eight females who were enrolled in grade ten English classes at the Lethbridge Collegiate Institute. These students were selected on the basis of their percentile scores on the reading comprehension section of the TASK TEST, LEVEL II which they had written (at the end of grade nine) in May, 1978.

Of those selected, four boys and four girls scored above the 75th percentile, and four boys and four girls scored below the 25th percentile. For a range of their percentiles, see Table 1.

The students were also chosen according to what module in the day they were taking English. This ensured that an equal number of subjects were chosen from each of the five modules during the day, offsetting as much as possible the effect that the time of day might have on the performance of the subject. The sampling from all of the English modules also assured a variety of English teachers, so that the nature of instruction on metaphor during the present year would not confound the results of the observed student performance. Further assurance of instructional variety was established by the fact that the Lethbridge Collegiate Institute is fed by three different junior high schools.

Table 1

Reading Comprehension Percentile Ranking for Each Subject

Student	Percentile Ranking
A	13
B	17
C	23
D	6
E	12
F	13
G	12
H	10
I	94
J	77
K	82
L	75
M	80
N	82
O	90
P	77

After tentative choice of the sample, the English teacher of each student was asked to confirm whether the student was a native speaker of English, and whether he possessed an average, or better, level of language facility. This was felt to be a necessary step in order to ensure that the student's metaphorical processing was not being hampered

by either an inability, or reticence, to express ideas verbally. One student who was extremely shy was dropped from the study, and an alternate subject was chosen.

The two groups of reading comprehenders were established in order to determine what differences, if any, arose in the processing of metaphor. This information, if consistent, might reveal why students have difficulty comprehending metaphor when reading. Secondly, the use of the two groups would yield information on whether similar differences, if there were any, remained when the subjects were presented the poems orally, or through a combination of the written and oral medium. It was hypothesized that low reading comprehenders would have less difficulty in interpreting metaphor when the medium was changed from reading only, to either listening, or reading and listening. If significant differences occurred for all subjects when the communication medium was changed, studies of metaphorical competence based upon reading alone, or listening alone, would have to be re-examined and qualified.

THE INSTRUMENT AND ITS ADMINISTRATION

The purpose of this study was to examine <u>how</u> grade ten students interpret metaphor, and to determine whether presenting metaphor through reading, listening, or reading and listening affected the subject's method of processing. The study was also designed to observe whether the interpretations were unique, and how context was used in interpreting.

Several procedures arising from the review of literature were followed. Because the study described the responses of the subjects, the researcher needed to allow for maximum response from the metaphor synthesizer. The metaphor synthesizer, therefore, needed to be at stage

two with the metaphor. That is, he would be able to perceive the relationships between the tenor and vehicle, thereby providing a gestalt of the meaning, and increasing his intellectual awareness. Most important was that he would not be at stage three where he would no longer cognitively process the metaphor. In order to exclude stage three metaphors, obscure poems were chosen so that the student would not have attempted to explain the metaphors before, or listened to another person's interpretation. Because of this procedure, each student would have to establish the tenor and vehicle on his own, as well as produce the relationships he perceived, rather than ones already stated by someone else.

To assure that the poems were obscure, they were not chosen from poetry anthologies recommended for high school. Also, each subject was questioned after the poem was presented to make sure he had not heard it or read it before. In the event that he had, extra poems had been prepared. Whereas the titles were left on the poems because they were a part of the context of the poem, the names of the authors of the poems were deleted to prevent a student from associating an author's style or common themes with the poem being processed.

The following poems were used:

1. "Night Crow" by Theodore Roethke
2. "Contemporary Man" by S.M. Gill
3. "The First Thin Ice" by R. Souster
4. "The Red Wheelbarrow" by W.C. Williams
5. "The Television" by G. Godbey
6. "Man on Wheels" by K. Shapiro

Each poem is presented in Appendix A.

Although it was not feasible to eliminate stage one in the interpreter's relationship with the metaphor (a rejection of the metaphor), the analysis of the data indicated a stage one relationship when the metaphor was interpreted literally, or completely rejected. It was also desirable to note how often and by whom the metaphors were being rejected. Whereas, the rejection of the metaphor would interfere with the subject's processing, the rejection would indicate to what extent metaphorical processing was occurring at the grade ten level.

In order not to restrict the kind of response or the method of organization used by the subject, the poems that were chosen usually left the tenors unstated. In this way, the number and kinds of relationships volunteered were not restricted. The relationships and the common places chosen were dependent upon the subject's unique use of context, background knowledge, and cognitive processing. The subject was also free to interpret the vehicles on a range from concrete to abstract, and to note one relationship or a multiplicity of relationships. To encourage him to give as many relationships as he could, he was consistently asked if he had anything more to add to his meaning.

A second major reason for using complete poems concerned the important effect context might have on processing. Since some studies suggested that a series of metaphors could affect the interpretation of each other, as well as the interpretation of the work or the mood, the complete poems were used to observe what pattern did arise. Providing a complete context would allow observance of how the subject selected cues, formed common places, or interpreted the metaphor.

A decision to use short poems containing a maximum of eight lines was based upon the fact that when listening, an extreme length

could interfere with the subject's processing. However, no attempt to restrict the number of metaphors within each one was made. This step was not considered because a range in number would only enhance the observation of patterns of processing.

Finally, in order to reduce the interference caused by unfamiliar syntax and vocabulary, and to motivate the students, the poems were chosen for their interest level, and were modern, conventional poems. The researcher also noted any words that seemed to pose a problem for the subject while he was discussing the poem. The subject was then asked to define these words after the probing of the metaphors, but before the final interpretation of the poem was given. If the subject offered no attempt, the researcher suggested possible meanings for the word. By using this procedure, the researcher was able to note the extent to which the vocabulary interfered with the interpretation.

Each poem was placed on a white 8½ by 11 inch sheet in order to prevent any influences from conflicting print, ideas, colors, etc. Also, a tape recording of the poems was prepared, so that when the subject listened to the poem, his interpretations would not be influenced by varying tonal or expressional changes of the researcher's voice. With the recording, even though the listeners might be partially influenced by the researcher's voice, all subjects would be affected in the same way.

Two sets of questions were designed in order to monitor the student's processing of the metaphors and the poems. The first set was designed to find the student's reaction to the poem, his interpretation, the cues he selected, and the relationships he volunteered without any direction from the interviewer. These were general

questions:

1. How does the poem make you feel? Is there anything else?
2. What meaning did you get from the poem?
3. What cues from the poem influenced your meaning?

For each question, the student was asked, "Is there anything else?" until all of his responses were exhausted. (See Appendix B)

After the initial questions, a different set of questions was asked in order to probe the student's processing that was not obvious in his first answers. This set of questions had been purposely designed to present as little direction as possible, because the researcher did not wish to direct the subject's thinking, other than to cue him to the metaphor. Each subject was also encouraged to state that the statement was literal if he believed that it had no other meaning.

The questions attempted to probe how the subject found meaning for the metaphor. Generally, they took the following form:

1. In (line in poem) what is (vehicle) being compared to? Is there anything else?
2. In what ways are they alike? Is there anything else?
3. How does this comparison contribute to the meaning of the poem? Is there anything else?
4. How does the comparison contribute to the feeling you get from the poem? Is there anything else?

See Appendix B for the complete set of questions for each poem.

THE INTERVIEW

Each student was interviewed individually, in a quiet room where disturbances were minimal. All interviews were tape recorded.

The interviewer, after introducing herself, explained the purpose of the study. Students were encouraged to present their interpretations and to respond freely, since the object of the study was to listen to the unique interpretation of each individual. Students were made to feel at ease, and they were assured that there was neither a correct nor a wrong response that could be given.

The nature of the task was then explained. Students were told that they would interpret six poems, two they would listen to, two they would read, and two they would simultaneously read and listen to. They were instructed to take as much time as they liked, to peruse the poem as often as they wished or to ask for repetitions (where listening was concerned) whenever they wished.

When the student was ready, the session began. After each poem, he was not asked any questions until he said he was ready to start. The questions were then administered orally by the interviewer. The interviewer constantly attempted to smile and act in a reassuring manner; however, no prompting of any kind was given. When vocabulary seemed a problem, the student was asked to define the word. If he did not attempt any definition, a definition was provided. (See Appendix C)

All subjects processed all poems. The six poems were presented in a systematic way to ensure that each poem had been read, listened to, and simultaneously read and listened to an equal number of times, but by different people. The following chart was used to ensure that each poem was read by different people, an equal number of times.

Subject	Reading	Listening	Reading and Listening
A	1,4	2,5	3,6
B	3,6	1,4	2,5
C	2,5	3,6	1,4

Each of the poems was given a number from one to six, and then the chart was followed. The number designations were:

"Night Crow" - 1

"Contemporary Man" - 2

"The First Thin Ice" - 3

"The Red Wheelbarrow" - 4

"Man on Wheels" - 5

"The Television" - 6

Subject A began by reading "Night Crow" (1). After discussing the poem, he listened to "Contemporary Man" (2). Next he read and listened to "The Thin Ice" (3). He then read "The Red Wheelbarrow" (4), listened to "Man on Wheels" (5), and read and listened to "The Television" (6). Subject B, though, began by listening to poem one. She then read and listened to poem two, and finally read poem three. Next, she listened to poem four, then read and listened to poem five, and lastly, read poem six. Subject C first read and listened to poem one, and then the medium of presentation was changed as it was for the previous subjects.

After Subject C had processed the poems, the same pattern of presentation was repeated with the remaining subjects. For example, Subject D used the same pattern that Subject A used, and Subject E, the pattern Subject B used. This pattern was continued until all of the subjects had processed the poems.

The alternating order used to present the poems helped to offset any effects upon the data that might have been caused by variables affecting student performance, such as nervousness.

All poems were discussed during the one interview, since the students seemed able to cope with the task. The length of the interview varied from approximately forty-five minutes to eighty minutes, indicating the variation in thinking time. The interviews were completed within a one week time span. All interviews were conducted by the researcher, and each session was tape-recorded.

PILOT STUDY

A pilot study was conducted prior to the main study, to determine whether the poems and the questions used were feasible, and whether any alterations were required. It also allowed for a preliminary analysis of the data.

Four grade ten students, three girls and one boy, were administered the poems and the questions. Two of the students were high comprehenders and two were low comprehenders.

The results of the study indicated that the students responded well to the poems and had minimal vocabulary difficulties. However, more probing questions seemed necessary and were added.

TREATMENT OF THE DATA

The tapes of the interviews were transcribed. When the transcriptions were reviewed, they proved to be too lengthy, and did not allow for an easy comparison of a subjects' responses before and after probing. To offset this problem, the researcher devised a format

that permitted a comparison of the feelings volunteered at different points throughout the interpretation, as well as a comparison of the interpretations of the metaphors and of the poem. It also clearly revealed the tenor/vehicle relationships given by the subject.

The form, called the "Organizing Processes Sheet", consisted of an 8½ by 11 inch page that was divided horizontally into six columns. (See Figure 1) The independent responses, given by the subject before any probing occurred, were recorded in the first three columns. The first emotional reaction to the poem given by the subject before he attempted an interpretation, was placed in the first column titled "feelings". This column also contained the feeling response given after the interpretation had been communicated. The second column titled "meaning and cues" contained the interpretation for the poem, as well as the cues used by the subject in creating his interpretation. If, when the subject presented his cues, he related them by explaining what the vehicles of the metaphors were being compared to, and what similarities were noted in the comparison, then these metaphorical relationships were placed in the column labelled "relationships".

The vehicle, tenor(s), and relationships were presented diagramatically so that the subject's categorizations could be readily observed. The vehicle was placed in a circle. The circles containing the tenors (a separate circle for each tenor) were shown to overlap with the vehicle. The area contained in the overlap of the circles represented the points of similarity between the disparate realms (tenor,vehicle). For example, Subject A stated that the "it" in "The Television" represented a television, and was being compared with a human. The points of similarity noted were "no life of its own" and "acting". How the

Name of Student _____

Name of Poem _____

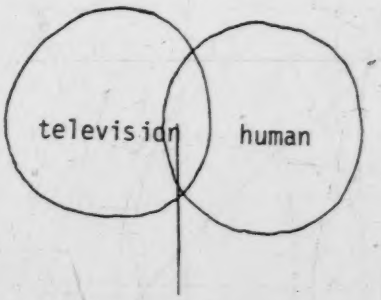
Medium _____

Unaided Processing			Probing		
1	2	3	4	5	6
"Feeling"	"Meaning and Cues"	"Relationships"	"Feeling"	"Meaning"	"Relationship"

Figure 1

Organizing Processes Sheet

vehicle, tenor, and points of similarity were related would be revealed through this diagram placed in Column three:



For the purposes of clarification, two terms require explanation.

Meaning Cue

A meaning cue is a word, phrase, or sentence given by a subject when he was asked to tell what ideas in the poem contributed to his meaning. For example, he may have provided "bird", "a clumsy crow", or "I saw a clumsy crow flap from a wasted tree."

Relationships

A relationship is a combination of ideas: the subject provides a tenor or tenors for a given vehicle, and explains the

similarities between the tenor(s) and the vehicle. For example, when asked what a "clumsy crow" is being compared to, the subject might give "man" as the tenor, and provide "they're both trying to "leave" as the commonalities of the tenor/vehicle comparison.

The last three columns contained the responses given by the subject during the probing session. Column four contained the emotional response given to each metaphor, as well as the final emotional response to the poem. Column five, labelled "interpretations" contained the subjects' responses to how each metaphor related to the meaning of the poem, and the final interpretation of the poem. Column six, as in Column three, presented the tenor/vehicle relationships noted during the probing. Finally, the researcher placed the words he had asked the subject to define, and the submitted definitions, at the bottom of the sheet, so that these definitions could easily be referred to when reading the subject's interpretation. For an example of the Organizing Processes Sheet containing a student's responses, see Appendix D.

The new form did not change the responses of the subject. The only words deleted were those that did not contribute to the meaning but only indicated a pause while thinking, such as "Ah, let me see," or "Um, well, ah."

The Organzing Processes Sheets were then used to compare the similarities and differences in responses among the subjects. The cue combinations of each subject for each poem were compared to the combinations of every other subject. Then, for each poem, the independent interpretation of each subject was compared to the independent interpretation of each other subject, as were the final interpretations of the subjects. Finally, the interpretations for each metaphor were

compared.

Next, for each poem, the researcher looked for any similarities in emotional response among the subjects, and possibly, any differences. This comparison was accomplished by placing all of the Organizing Processes Sheets for the same poem together. Each of these groups of papers were further categorized in terms of whether they had been read, listened to, or read and listened to. A comparison across the media of presentation was made, and still allowed for the observation of any differences that occurred among students.

After the major comparisons across subjects had been undertaken, the researcher then concentrated on the responses of each subject, in order to observe the organizing processes of each of the subjects.

With every poem, the researcher tried to determine whether the initial interpretation presented by the subject was similar to the final interpretation given. Whether the interpretation was literal or figurative, and whether a difference in the thought content was noticeable, were also noted.

In comparing the thought content, the researcher observed that the final interpretation sometimes seemed to paraphrase the original interpretation, but at other times, it was exactly alike, and on occasion, completely different. The researcher then checked the metaphorical relationships and noted that the interpretation of these also revealed a direct statement, or a paraphrasing of the independent interpretation, or no relation to it. This discovery of seeming relationships led to the formation of criteria that could be used to find the processing patterns utilized by the subjects when interpreting

metaphor. The following criteria were developed:

1. The interpretation of the tenor/vehicle of each metaphor either:
   a. states in the same words or paraphrases the original interpretation, or
   b. develops the idea of the original interpretation or a preceding metaphor further by combining it with other ideas related to it, or
   c. states an idea that has not previously been stated and is unrelated to previously stated ideas.
2. The final interpretation of the poem either:
   a. states in the same words or paraphrases the original interpretation, or
   b. further develops the idea of the last metaphor by relating it with another idea, or
   c. presents an idea that has not previously been stated and is unrelated to previously stated ideas.

The intention of the researcher was to circle the interpretations, and then by using arrows, indicate the direction that the subject took in processing. The following procedures were developed for drawing the arrows:

1. If 1a exists, draw an arrow from the metaphorical interpretation to the original interpretation. If 1b exists, draw an arrow from the interpretation first presenting the idea to the interpretation that combines it with another related idea. If 1c exists, draw no lines.
2. If the final interpretation paraphrases or states

explicitly the original interpretation, draw an arrow from the final to the original interpretation. If the final interpretation is a further development of the last metaphor, draw an arrow from the last metaphor to the final interpretation. If no relationships exist, draw no arrows.

A difficulty, however, arose with the Organizing Processes Sheet which was not conducive to a series of circles and arrows. Therefore, a new form was adopted. A "Patterns of Processing Card" was developed, and is found in Figure 2. The researcher used 5½ by 7 inch cards, because they could be shuffled easily, or laid out side by side, so that emerging similar patterns could be seen.

The card separated the unaided processing (independent) responses from the probed responses. The left hand side of the card contained the beginning and final feelings. (Feelings were included because the cards could later be used to note the relationships between feelings and interpretations.) The cues the subject had given during the unaided processing were symbolized by horizontal arrows, and the relationships given during the unaided processing were transferred from the Organizing Processes Sheet onto the card to the immediate right of these arrows. The initial interpretation was placed on the bottom of the left side of the card. The right side of the card indicated any change in feelings that occurred during processing, and listed the interpretations of the metaphors. To the right of each metaphorical interpretation was placed the corresponding tenor/vehicle relationships. The final interpretation was placed at the bottom of the card on the right hand side. Each interpretation was then circled.

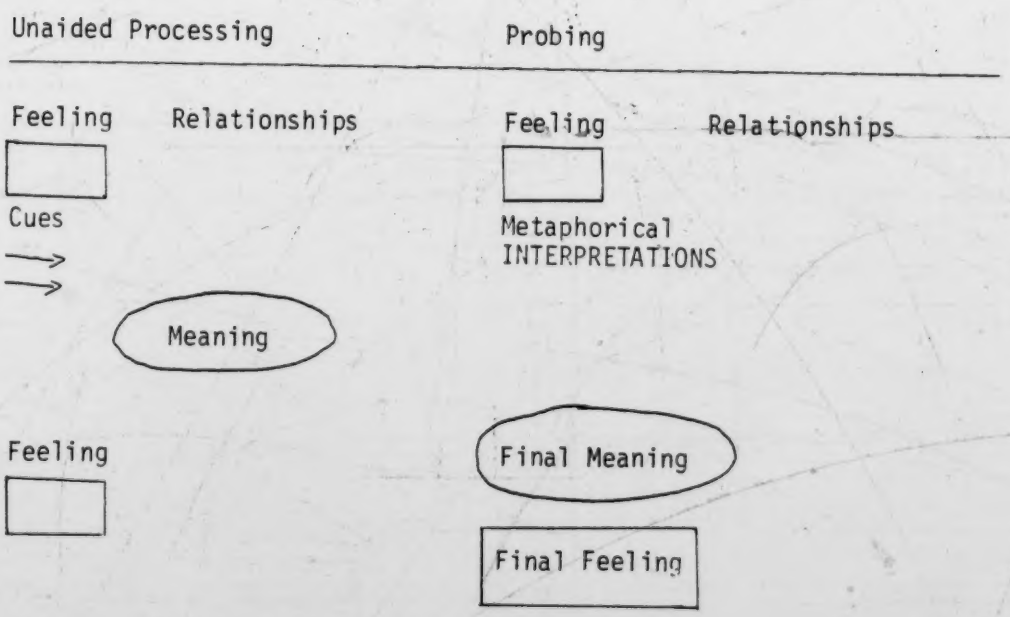


Figure 2

Patterns of Processing Card

Using the criteria and procedures previously outlined, the researcher drew arrows connecting appropriate circles. When this task was completed, the cards were placed side by side. Any cards showing a similarity in pattern were placed in a separate pile. The information on the backs of the cards was then used to determine what the basis for the similarity of the pattern might be.

The back of each card had listed the subject's identification, the reading percentile he attained on the TASK Test, Level 2, the poem being described, and the medium of presentation used. This information was placed on the back of the card because the researcher did not wish this information to influence the classifying of the patterns in any way.

It should be noted that while the relationships between the interpretations were determined in a subjective manner, a consistent set of criteria had been used in determining the patterns. The purpose of the research was only to explore, as a preliminary study, whether a difference in processing might be created by the medium of presentation. This purpose was achieved. The researcher was also able to formulate a set of criteria that might be used in the future to design an inter-rater reliability test of the differences in the organizational patterns of processing that are produced by an alteration in the medium of presentation.

After the major differences in processing were determined, the researcher addressed the differences between the processing done by low readers and high readers. These differences were considered in terms of the three presentation media, as well. The researcher wished to determine if high readers gave more figurative interpretations,

processed more information, used more context, volunteered more tenors and relationships, accommodated (provided disparate realms and relationships) more relationships, or remained more flexible in their approach to the tasks when reading, listening, or reading and listening.

In order to determine if high readers attempted metaphorical interpretations more often than low readers during the unaided processing, the researcher reviewed the independent interpretations. Since each poem contained metaphors requiring explanation, a literal interpretation would indicate a rejection of metaphorical meaning. Therefore, the number of literal interpretations were totaled for each group. The group totals were then compared. Next, the researcher studied the final interpretation of each subject and noted which of these remained literal. The total number of literal responses provided after probing by the low readers was compared with the total number provided by the high readers.

Because there was a great difference in the number of literal responses produced during the unaided processing, the researcher questioned why the low readers tended to reject the metaphors, and interpret literally. In search of an answer, the researcher observed the cues that had been volunteered as the ideas upon which the subjects had based their interpretations. The researcher also observed any metaphorical relationships that the subjects had noted during the unaided processing. These student responses were compared across the media of presentation as well, to determine if one of the media of presentation was causing the difficulties.

First, the relationships volunteered by the low readers were totaled for each medium. These three sub-totals were then added to find the final total. The same procedure was used for the tallying of the high readers' responses. The sub-totals and final totals were then compared.

Next, the cues reflected relations that may have been made but not volunteered when the cues were being presented. For example, a student may have incorporated two bits of information occurring at different places in the poem into one cue before he presented his cues, and although he did make a relationship , did not feel he needed to explain it. Therefore, relationships were further observed by examining the cues. The cues also indicated how much context had been used and from where in the poem the context was chosen.

To determine if high readers used more context and related ideas more, the number of cues used by each subject was compared, as was the total number of cues presented by the high readers and the low readers. The total used by each subject was compared in order to determine if the group's number of cues was mainly provided by one or two people. If so, the totals of the groups would not provide a valid comparison between the groups.

A difference in the amount of information found within each cue was observed, as well. It seemed that while the low readers might have used a similar number of cues, their cues were simpler and carried less information. This cue simplification could then be a factor contributing to their high number of literal responses. The cue recalls were, therefore, analyzed in terms of their complexity. They were first classified into five categories of complexity:

1. one word - "chicken"
2. two words - "the chickens"
3. a simple phrase - "beside the chickens"
4. a phrase containing an embedded proposition - "beside the white chickens"
5. a sentence (could contain one or more embedded propositions) - "so much depends on the wheelbarrow beside the white chickens".

Then, a comparison was made between the high and low readers for the complexity of the responses found in each of the three media.

Although this analysis reflected which group was providing more information in their cues, it did not reveal whether the information had been processed and stated in their own words, inferred, or just repeated verbatim from the text of the poem. This form of analysis would yield important information on the subjects' relating habits. The cue recalls were then classified into three categories:

1. exact recalls - stated in the same words as the text.
2. paraphrase recalls - containing the same idea as in the text but phrased in the subject's words.
3. inferred recalls - idea not stated in the text but inferred from the ideas stated.

Once again the number in each category was tallied in each medium for each group, and comparisons were then undertaken.

The cue combinations given by each individual was then compared, to note if any differences might be reflected by the medium of presentation. Although the fact that all combinations were unique had already been established, the researcher noted whether any differences

in interpretation might be occurring because of the popularity of some of the cues chosen in particular mediums. What overlap in cue selection occurred across the different media presentations was ascertained by tallying the number of times each cue was presented in each medium, and in total.

After the cues and the answers that were provided during the unaided processing were examined, the researcher then analyzed and compared the subjects' processing of the individual metaphors during probing. Five areas were examined to determine:

1. how the subjects provided tenors,
2. how they related tenors and vehicles,
3. how their processing affected the meaning provided for the metaphor,
4. how their emotional reactions were affected by the metaphorical interpretation, and
5. how their meaning was affected by the metaphorical processing.

In order to determine whether the high and low readers used similar organizing processes when providing tenors, and relationships for a vehicle, the responses were analyzed and categorized according to whether the subject attempted to provide meaning for the vehicle by:

1. interpreting it literally,
2. not interpreting it at all, but indicating that it had a figurative rather than a literal meaning.
3. comparing, by embedding it into a tenor that was a larger general category of the vehicle, for example,

"Ford" would be compared to "car".

4. contrasting, by providing a different type of tenor, and noting how the disparate realms are alike; for example, a television would be compared to a person because they both present or are part of a dream world.

The totals for each category for high readers and low readers were then compared.

The number of tenors provided was tallied, as was the number of relationships volunteered by each group. The totals of the two groups were then compared for reading, listening, and reading and listening.

Because the researcher was concerned over whether the tenor/vehicle relationships provided by the low readers were as abstract or concrete as those provided by the high readers, examples of concrete and abstract answers were found in the work of the groups. The answers seemed to range from very concrete to very abstract, and thus numbers could not be determined. Rather the range of concrete to abstract was exemplified by the answers from both groups.

After the differences in the relating of ideas in the cues and in the tenor/vehicle relationships had been determined between the groups, the difference in the relationships between the cognitive and affective interpretations was observed. For each change of feeling noted on the "Patterns of Processing Card", the meanings provided before the feeling and after the feeling were inspected to note if the feelings were the result of the meaning change, and if the feeling change then affected the following meaning provided. The differences between groups were outlined and compared.

Through the analysis of the data previously outlined, the following questions were answered:

1. Are grade ten students' metaphorical interpretations original, and if so, what contributes to the originality?
2. What kind of organizing processes were used by tenth grade students in interpreting metaphor.
3. As the medium of presentation is manipulated from reading, to listening, to simultaneously reading and listening, what major changes in their organizing processes do high and low readers make when they attempt to independently interpret a complete poem?
   a. Do they interpret the poem literally or figuratively?
   b. Is there a difference in the number of metaphorical relationships they volunteer during their interpretation?
   c. Are the cues used as the basis of their meaning different in kind, number and/or complexity?
4. As the medium of presentation is varied from reading, to listening, to simultaneously reading and listening, what major changes in the organizing processes do high and low readers make when they are asked to interpret given metaphors within the context of a complete work?
   a. What organizing processes do they attempt in providing tenors for given vehicles?
   b. How many and what kinds of relationships between vehicle and tenors do they provide?
   c. How does their processing of the metaphor influence

their interpretation of the metaphor, their emotional reactions, and their interpretation of the poem?

A summary of the answers to these questions is presented in Chapter 4.

CHAPTER 4

DISCUSSION OF THE FINDINGS

This chapter is divided into three sections. The first section provides examples of the idiosyncratic responses created by the subjects. The second section relates the major organizing patterns used by the subjects when they interpreted metaphor after listening, reading, and listening and reading to the poems. The final section reports the differences between high and low readers' processing of metaphor.

ORIGINALITY OF STUDENT RESPONSE

The findings of this study revealed that the metaphor synthesizer extracted an individual set of cues, created an original meaning for each metaphor, and emotionally reacted to the interpretations in various ways. The interpretations created by each subject were highly personal. Examples of their responses were reported to answer the following research question:

> Are the interpretations provided by tenth grade subjects personal creations, and if so, what contributes to the differences in meaning?

The following discussion presents some of the subjects' interpretations of the poem.

INTERPRETATIONS OF THE POEMS

Before probing, the subjects provided interpretations that were the products of their creativity. As a result, the interpretations

given were original, as is demonstrated by the following interpretations of "Night Crow":

A: This man has an ambition or something and its going further and further away from him.

B: Your thoughts in your mind: sometimes you don't know what to think, and then sometimes you're clever and know exactly what's going on.

J: A person is dreaming about something dumb.

K: Someone is losing a memory. Its kind of fading and they don't, they can't remember as much of it as they used to.

E: A person is remembering something that has happened, that he should remember.

Even the literal interpretations varied:

C: A crow - he's a special bird - but he is still something special. He's part of God's creation so he should be treated a little better.

D: It's just about a big bird.

F: Crows are clumsy and they flap and they're black. They fly off into the night without being seen.

P: All creatures are, no matter what they look like, beautiful in their own way.

Although the figurative interpretations seemed to label the topic of discussion as a thought, dream, memory, or ambition, what was said about the topic differed significantly. Although most of the literal interpretations centered around the crow, they, too, dealt with different things.

After the probing, the meanings tended to change in that the low readers now interpreted figuratively, and the high readers slightly qualified or altered their meaning. All meanings were still very personal, as demonstrated by the responses given for "Contemporary Man":

Independent	After Probing
H: Someone's feeling discouraged, afraid he's by himself.	It's about what's going on in the world now.
P: A man was alone.	Every modern man is trying to reach a goal and some can't do it because no one is helping them.
O: Days of chivalry are all over and contemporary man is out for himself to get his and that's it. There's not going to be any miracles for some reason.	No change.
E: Man is different now than he was before. He doesn't think for some reason.	The past was probably better than now. I mean without all the luxuries. Man was more free to do whatever he wanted.
H: The only things in life that are important are being pushed away and erased, and contemporary man has worked hard.	Older people wish to be in society and contemporary man doesn't realize what he's doing to our lifetime.
L: Today's world is not very good anymore because all of man's dreams are taken away and he just doesn't have anything to look foward to.	He doesn't want to be in a place like that - he wants to be happy and have people care about him.
G: He was out in the desert and he had no hope.	Average man is thinking there's nothing to fall back on. He's out in the middle of the desert no more hope, no star or anything to follow back.

Independent	After Probing
F: Some people don't think as much of life as others.	His life is lousy and he's trying to erase it and start over, but there's not as much hope as he wishes there was.
K: Modern man is kind of molded and not allowed to grow as much as he wanted to, and his stuff is taken away from him - that he could have, individually like.	Contemporary man is supposed to be up-to-date and modern, really he's not. He's being molded and its not as good as -- like, contemporary man sounds good, and the poem cuts it down.
J: Its a guy on the desert, and he's lost.	They're just staggering around, not really thinking for themselves. They -- maybe, its a bunch of people, or everybody -- they're staggering around doing what they've been told to do, not what they think -- like zombies.
B: Man has died or something.	When you die, there's nothing left, and he's kind of stripped of his life. His life is taken away from him.
A: Its a little village, and there's a big storm. The man has got no hope.	Man today - what he's like. In big cities and stuff - he's all, all, all by himself sometimes.

Whether the subject had altered his first meaning of the poem to a different meaning depended upon the medium of presentation, and an explanation of the effect of the medium will be discussed later in the chapter.

Contributing to the originality of the interpretations were the individual sets of cues selected by each subject. Each set provided the subject with a different bank of information that he used in creating his meaning.

CUE SETS

Each subject relied upon a different context for his meaning. How the contextual patterns differed is illustrated through the following examples of the subjects' cue selections. The cue sets were volunteered by the subjects when they were asked to tell what cues in the poem, "Contemporary Man" contributed to their meaning of the poem:

A: footprint
hopebuds

C: thought wing
hopebud

D: thirst-quenching
rosebud

E: footprints erased
desert

G: none

I: footprint erased
no hopebud
no Moses or star
something about flight in the first line

J: thought wing cracked and clipped
His footprints are erased.
He is raped in desert solitude.

L: hopebuds shrunk
no Moses
doesn't have any thirst to quench
doesn't have any desire to do anything

M: footprint erased
hopebuds shrunk
thought wing cracked and clipped

O: no Moses or star
average person not having patience or courage
any thirst to quench

P: prints erased
hopebuds thing
desireless of the ... can't remember
the part in the desert thing

The examples reveal that where one cue may have been used by several subjects, no two subjects ever gave the same set of cues. Also, the cues were chosen from various parts of the poem. For example, Subject A chose "footprint" from line three of the poem and combined it with "hopebuds" from line four of the poem. Subject D, on the other hand, first mentioned "thirst quenching" which presumably was derived from line seven: no thirst to quench. He combined this cue with "rosebud" which it seems he derived from "hopebud" in line four. Subject J combined the first two lines for his first cue, "thoughtwing cracked and clipped". He also chose "the footprint erased" from line three, and "he is raped in desert solitude" from the last two lines. Thus, while Subject J had completely omitted the middle context of the poem, relying on the beginning and final context, Subject D relied only on the middle context. Subject N cued on only the first four lines of the poem. It is interesting to note that only two subjects used the final two lines of the poem: "he is raped in desert solitude".

Not only were the cue sets idiosyncratic, but they were also very limited in number. The researcher had expected that the subjects would provide more cues when they read, or read and listened, than when they only listened, especially when they processed the longer poems. However, this expectation was not affirmed by the data. The subjects always provided only two, three, or at the most, four cues, regardless

of the length of the poem, or the medium of presentation. (One subject provided more cues when he read and listened.) Some of the volunteered cues did, though, carry more information than others, as can be noted by comparing "footprint" with "thought wing cracked and clipped". The limitations of the number of cues used, coupled with the fact that the cues were extracted from various parts of the poem, seem to suggest that the complete context of the poem is rarely used. Rather, the subject cues on what is important to him. The personal cues set he forms influences his interpretation.

The medium of presentation did seem to somewhat affect the cues chosen by the subjects. Whereas many cues were chosen only in one medium, some were chosen several times. For example, for "Night Crow" the only cue that was presented in all three of the mediums was "clumsy crow", and it was given only four times. A more popular cue was "deep in the brain far back" but it was chosen only when the subjects read, or read and listened to the poem. It was chosen seven times. For a listing of the cue selections according to the medium of presentation, see Table 2.

In conclusion, while the choice of the cues comprising the cue set may be influenced by the medium of presentation, it is dependent, to a great extent, upon the interpreter of the poem. These individual cue sets provide the context for the personal interpretations volunteered by the subjects.

The metaphorical relationships provided by the subjects also conveyed the importance of the interpreter as creator. Examples of the personal tenors, relationships, and interpretations will be given in the next section.

Table 2

Cue Selection According to the Medium of Presentation

Medium Used In Presenting "Night Crow"	Cue	Frequency of Use
Reading, Listening, Reading and Listening	clumsy crow	4
Reading, Reading and Listening	deep in the brain far back	7
	tremendous bird	6
	shape in the mind rose up	4
	over gulfs of dream	2
Listening, Reading and Listening	none in common	
Listening, Reading	black	2
	darkness	2
Reading	bird	1
	crow	1
	when he flew from a wasted tree	1
	back and back	1
	wasted tree	1
	night crow	1
Listening	back in the brain	1
	clumsy bird when it flew off the branch	1
	far back into your mind	1
	far back in the brain	1
	crows are clumsy	1
	endless, moonless night	1
	into the night	1
	flap	1
Reading and Listening	when I saw that clumsy crow flap from a wasted tree	1
	tremendous bird just flew off a tree into the horizon	1
	further and further away	1

METAPHORICAL INTERPRETATIONS

While the tenor provided might be repeated by some subjects, no two interpretations were the same. The overlap found in the tenors seemed to result from the subjects selecting large categories as their tenors, for example, a "human" or a "person". However, the points of similarity between the tenor and vehicle varied considerably. For example, in responding to what the "it" in "The Television" was being compared to, the subjects provided the following tenors, relationships and interpretations:

Subject	Tenor(s)	Relationships	Interpretation
A:	human	no life of its own, acting	People shouldn't be phony - they should be themselves.
B:	real life, a person	unaccustomed to movement, not strong	People have control over what they're doing. They know what they're going to do and they do it. They think about what they're going to do first.
C:	human, anything that can creep	looking at the night, sitting there, lifting the blind	Don't know.
D:	robot	both man-made, aluminum tentacle	Don't know.
E:	someone who has to face up to real life	not used to facing reality, wouldn't know how to handle it	On T.V. you see all sorts of different things about life and people you can't face up to.

Subject	Tenor(s)	Relationships	Interpretation
H:	people	stay inside all of the time, never get out	Usually when people stay home, they escape into their television shows and they never really taste reality.
J:	person	looks out the window, looks at the night, lifts the blind, crept to the window	Makes the T.V. seem more alive.
N:	sexless object, a living object, a person	it can think, decides that it wants reality, subjected to fantasy	The T.V. set is a base for a mass unreality on a large scale. If you watch T.V., it has so much that has nothing to do with reality in any form. If a T.V. did have its own sense of morals, it would probably be quite upset - if you were exposed to fantasy twenty-four hours a day, you'd go nuts.
P:	the things that are not real	someone living in a make believe world	The person is just being unreal - doing things he shouldn't be. He should be doing things that are more real - in the real world - just not living in a make believe world.

While fifteen of the sixteen subjects interpreted "it" to be the television, Subject J stated that "it" represented the "television waves - the pictures the television sends out". Whereas many subjects felt the television was being compared to a person, one saw it as a "sexless object" or a "robot". Some of the subjects tried to give a specific tenor and then a larger category for that tenor. For example, Subject C said the television was compared to a "human" or "anything

that can creep," and N said it was compared to "a sexless object," "a living object," "a person". The relationships noted varied from very concrete similarities such as "looks out the window, looks at the night," "lifts the blind" to very abstract similarities such as "it can think", "decides it wants reality," and is "subjected to fantasy." For this poem, Subjects C, D and J gave concrete relationships and had difficulty interpreting the metaphor, but providing concrete relationships did not always result in difficulty with interpretations.

While unreality seemed to be a topic that the interpretations centered around, all interpretations were different. For one, the metaphor meant that "people shouldn't be phony, and for another that "when people stay home, they escape into their television shows and never taste reality." To subject N, "the T.V. was a base for a mass unreality".

These personal metaphorical interpretations contributed to the individual interpretations of the poems, and also affected the emotional response felt by the subject. The next section reports the different emotional responses given when the subjects interpreted a metaphor.

EMOTIONAL RESPONSES

In describing the differences in emotional reactions, the tenors and relationships, as well as the relationship to the meaning of the poem are given, since the emotional responses seem to be so interrelated with them. The following responses are the subjects' reactions to "the first thin ice of winter" in the poem, "The First Thin Ice":

Subject	Tenor(s)	Relationships	Interpretation	Emotion
A:	ducks walking warily	falling, being cautious, just starting out	People are just starting out and don't want nothing bad to happen - so they're walking warily - being cautious.	nothing
B:	steps - a child learning how to walk	wobbly, slow cautious	The first steps a person takes into life.	good
E:	first hope of having a lasting relationship	wonder if can keep it, or will it melt away	Don't know.	happy and sad.
I:	life	hardships, must go slowly so as not to fall through	That two young people just got married or something, and they're going out into life and	apprehension fear
J:	first love with someone	not going to last forever you break through and find somebody else	Anyting can to wrong when you're in love. Someone walks out on you.	cautious
K:	first time of love-making	dangerous if they don't be careful	If not careful, will get pregnant	thoughtful
F:	whether you should step forward	not sure if it will hold	Worried about life - if you should take a step forward in life. You're going cautiously and you're not sure about what you've done and what's good for you.	serene, peaceful, yet wary

Subject	Tenor(s)	Relationships	Interpretation	Emotion
O:	everything winding down	everything going to sleep	Winter's coming pretty soon	none
P:	lovemaking	beginning, new, at first exciting	Like the first new, thin ice, they're just falling in love.	nice

After interpreting the first thin ice of winter, the emotional responses of the subjects varied from "nothing" to "good", to "apprehension" to "serene yet wary". Subject J reacted with "fear and apprehension" because a young married couple are just going out into life and anything could go wrong. To this person the tenor "life" conjured many hardships. Subject P provided "lovemaking" as the tenor, suggesting a new beginning, and excitement. She interpreted the metaphor as "they're just falling in love" and emotionally felt this happening was "nice". When an emotion was felt, the feeling did seem to depend upon the tenors that were chosen and the relationships that were found.

The same interrelationships between the cognitive and affective reactions were observed with the other poems. For example, "moonless black deep in the brain" in "Night Crow" caused varying emotional reactions that seemed dependent upon the interpretations of the metaphors:

Subject	Tenor(s)	Relationships	Interpretation	Emotion
A:	thinking	blackness, no future, no dream	What he's thinking deep in his brain that's really black. No future ahead of him.	sorry

Subject	Tenor(s)	Relationships	Interpretation	Emotion
B:	inside your head	darkness, no light spots	Don't know.	good
C:	death	none	Life has gone by.	sad
D:	a memory	not too clear, just a flash of what happened	Don't know.	wonder what's happening
E:	sleep	white silhouette black around edges, drifting far away from the body	He's asleep and in a deep dream.	mild, happiness
I:	subcon-scious	deep in the corner of his mind that he doesn't go into, not much light, can't see	He's falling asleep or something	hopelessness
L:	night-mare	forgetfulness, wasteland, nothing belongs there, don't want to remember, don't want to be seen again	An exiled thought.	not wanted
M:	wish to take off	can fly a long ways, no problem to go someplace	He was imagining he was a bird and he could just get up and leave.	good

The subjects, through their flexible use of the context, created original metaphorical interpretations and reacted with varied emotional responses. As a result, they produced original insights into the poems.

This first section of the chapter confirmed the originality of each subject's responses. It also confirmed the use of the varying

parts of the complete context of the work, when interpreting a poem. The next section reveals the difference in context used when processing metaphor and the importance the media of presentation plays in determining meaning.

PATTERNS OF ORGANIZING PROCESSES USED IN METAPHORICAL INTERPRETATION

The following research question had been asked:

> What kinds of organizing processes were used by tenth grade students in interpreting metaphors.

The data yielded three major patterns of organization that corresponded with the change in the medium of presentation. These patterns not only affected the interpretations of the metaphors, but they also affected the final interpretation of the poem. Each pattern will be discussed and illustrated in the following three sections. It should be noted that the only exceptions to the patterns occurred when the subject was unable to produce tenor/vehicle relationships. This inability to process the metaphors interrupted the subjects' complete pattern of processing.

PROCESSING OF METAPHOR: LISTENING PATTERN

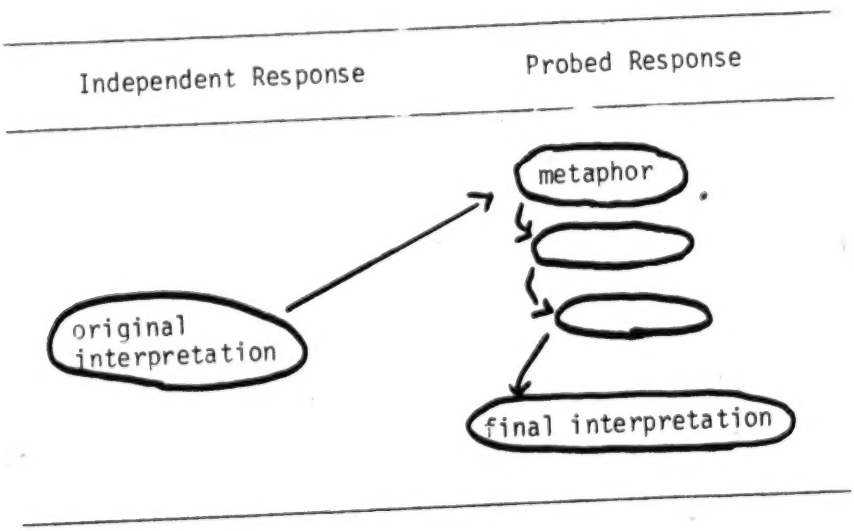
Regardless of which poems the subjects listened to, all of the subjects other than those who could not explain the metaphorical relationships, provided a final interpretation different from their initial interpretation given during the unaided processing. This change occurred through the processing of the metaphors. The

interpretation of each metaphor was related to the interpretation of the metaphor preceding it. In this way, the final interpretation evolved through a series of meaning changes that were created by each metaphor. For example, subject A when interpreting "Contemporary Man" stated that the poem was about "a big storm - a footprint was washed away - no hope for the man". This literal meaning for the poem then evolved to a final interpretation that accounted for present day mankind, rather than for one specific man in a big storm. When asked what the first metaphor (thought wing) meant, he stated that it was being compared to "man's hopes and desires" and they were similar in "being broken". This metaphor was related to the meaning of the poem in that "ideas don't work out the way you wanted". When subject A was asked what "footprint in the sand" was being compared to, he replied "Man's thoughts," and found them similar in that "they were being rubbed away," and were "disappearing". This metaphor he related to the last, by pointing out that "if man wants to be something and it doesn't turn out, he'll settle for something else." In this way, he built upon the interpretation of the last metaphor. When asked what hopebuds were being compared to, he replied "man's wishes", and "what he wants to be." In that hopebuds and man's wishes were shrinking, he concluded that "man can't get what he wants." "No Moses or star," he compared with "help", stating that there was "nothing", and "raped in desert solitude" was compared to "being all alone." When asked what the title "Contemporary Man" meant, Subject A replied "Man today - what he's like."

The final interpretation for the poem was "Man today - what he's like. He's all alone by himself." He had moved from describing

a single man in a storm to mankind in today's society. The "no hope" had evolved to being "all alone by himself." If his metaphorical interpretations were placed side by side, an evolvement of their meaning could be noticed from "ideas don't work out the way you want" so "man will settle for something else" but "man can't get what he wants", to "Man today - what he's like - he's all alone."

All of the students processed the poems in a similar fashion, by proceeding from metaphor to metaphor, using the previous interpretation as a cue for each metaphorical interpretation. Appendix E reveals how the metaphorical interpretations were related to the original and final meanings. When the meanings were extracted from the diagram, the following pattern emerged:



The original interpretations given by the subjects were not necessarily all literal. Even the figurative interpretations showed a change in meaning. Subject G, when interpreting "Contemporary Man" during the unaided processing, said the poem meant that "the only things in life that are important are being pushed away and erased - and

contemporary man has worked hard." Her evolvement of her final meaning can be noted in her metaphorical interpretations. When asked what the "thought wing" was being compared to, she replied "things that were before." These realms were similar in that they were "cracked" and "crushed". She then stated, "That's what has happened to contemporary man. Makes you stop and realize that we think it's so great in today's society, but we should be thinking of times before." When asked what the footprint was being compared to, she could only reply "all kinds of things; his own footprint" but could not relate them. However, when asked what the "hopebuds" were compared to, she cued on the "stop and realize" of her last explanation and on her feelings, as she had said, the poem made her "stop and think". She likened the hopebuds to the "thoughts and ideas of people" in that "they had something good to offer but were not accepted" and they were "reduced". Her meaning now progressed to "Society pushes people aside. They are reduced and made to feel insignificant." After she interpreted "No Moses or star" as a comparison to "Bible," "going back in time," she stated they were common in being "respected" and "looked up to." Her interpretation altered from people being made to feel insignificant to "shows how the old are tossed in the middle of society, and we don't listen to what they have to say. They might have more insight than we actually do. Now we think of old people as people we should put away, and then, they were considered to be the leaders and maybe we should think of that." Finally, "raped in desert solitude" was being compared to "the thought that there's nothing left to blame except himself" and the shared characteristic between these realms is "solitude". She ended by saying she felt sorry for older people, and

that contemporary man doesn't realize what he's doing to our lifetime.

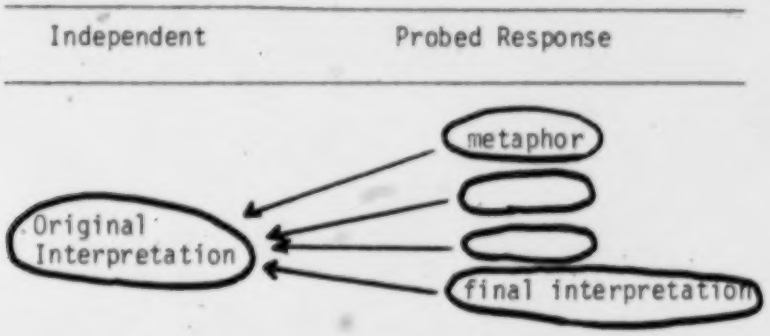
Some students moved from a literal to a figurative interpretation, as well. Therefore, no pattern such as from literal to interpretive could be established, but their processing from meaning to meaning led them to an interpretation different than the one they had begun with.

PROCESSING OF METAPHOR: READING PATTERN

A different pattern of processing emerged when the subject read the poem. Subject A (described in listening section) now related each metaphor by paraphrasing the interpretation he had presented during the unaided processing. For example, his beginning interpretation of "Night Crow" was "A man has an ambition or dream that is flying away." During the probing, he compared "clumsy crow" with "ambitions" because they were "unreachable, awkward, leaving." His interpretation for this metaphor paraphrased the original interpretation: "he'll never get his ambition." "The wasted tree" was compared to "man" because both were "old and wasted", but the subject was unsure how this metaphor related. After saying "don't know" several times, he replied "the man could be old and wasted - his life is wasted." The "gulfs of dream" were "man's dream" and were similar in that they were "wide open" and you "can't catch it." Again his interpretation reflected the original idea: "Man can't catch it - a dream world." When he was asked what the "tremendous bird" was being compared to, he replied "man's great ambition," and they were similar in that both were "big, good looking, unattainable." Again, his interpretation of this metaphor paraphrased his beginning interpretation: "He has a big

dream but he can't get it." The "moonless black," he related to "thinking", because of "blackness," "no future", and "no dream." Again, he paraphrased the original interpretation: "What he's thinking deep in his brain - no future ahead of him". His final interpretation reiterated the beginning one, when he stated "The guy is losing something - an ambition."

This method of organizing can be diagramatically represented in the following way:



Whether the original interpretation was literal or figurative did not seem to matter. Subject B, after reading "The First Thin Ice," interpreted the poem as "a little child learning how to walk." To her "lovemaking" was being compared to "a mother". They were similar because of the "helping", "the holding on to each other to help." She related this metaphor by stating almost exactly her first interpretation: "Someone's learning to walk." When asked how the title related to the poem, she replied "The first steps a person takes into life." The pattern remained consisted for the subjects. When reading, they related all the metaphors directly to their original interpretation.

PROCESSING OF METAPHOR: READING AND LISTENING

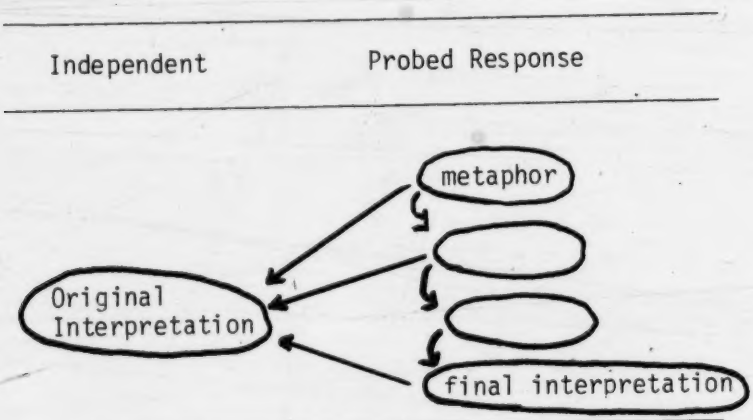
When reading and listening, the subjects combined the strategies they used when reading, with those they used when listening. Subject I was especially interesting to observe because he related his ideas and explained the relationships when he presented his cues, only while reading and listening. He volunteered a large number of relationships that related to one another, as well as to his original interpretation. He began by stating the poem meant that "Cars almost become a part of man's personality." When asked what cues he used in determining his meaning, he replied "Poets think that cars are wicked and pollution and everything, but he says 'wrong as usual', so I guess he's presenting his opinion that he always thinks poets are wrong. And then it goes 'Cars are a part of man,' and he says they're part of our society, and they're biological - part of our life, like trees. And then it says 'a man without a car is like a clam without a shell,' so he's defenseless, and can't really get around very easily. And it says 'grant you, machinery is hell, but carless man is careless and defenseless.' He can't really get around, and he doesn't have a car. Most people have a car, so he might just not care about anything. And then it says, 'Ford is skin of present animal,' so present animal would probably be man, so Ford has become like a skin to us, the brand of a car. 'Automobile is shell' - so that's just a shell we put ourselves into, and then it says 'you get yourself a shell or else,' that you need a car, otherwise you won't be able to get around and you won't be able to survive."

When the subject was asked what "cars" in "cars are wicked" were compared to, he replied, "people". He found them similar because

both "wreck the environment" and "kill people." His interpretation paraphrased the original: "Makes you think - start comparing yourself to a car - are you really like that." He then compared "cars" in "cars are a part of man" to "a part of our body," "a right arm." These were similar in that "you can't go anywhere without them," "if you lose it, you can't go on without it," and you "can't get along without them." The interpretation of this metaphor also reflected the original: "Makes you wonder if they're that important to us, and if they should be." When asked what "cars" in "cars are biological" was being compared to, he replied, "parts of the environment, like trees" because there were "so many of them, it eventually dies," and it has "a life cycle, then gets old and not as useful, and then dies." This metaphor meant that "You know it isn't going to last forever - only going to be there for a time - just like everything else." "A man without a car is like a clam without a shell" showed the "man" and "clam" being "defenseless," "always having to watch where he's going," and having to "worry about predators," and "can't get around easily." This metaphor, he interpreted as "a guy needs a car to make it, otherwise its a big hassle." The "machinery" in "machinery is hell" was compared to "life", in that "it always goes to a set rhythm" so "cars, the rhythmic lives of people - you wonder if its all worth it." When Subject I attempted "Ford is skin of present animal," he related it to the other metaphors as well. "Ford" was a class within "cars". "Cars" were being compared to "man-us" and their similar qualities were "skin," that they "were always present," and that a "reliance for protection" occurred. He suggested that this metaphor reiterated that the "cars are a part of man," that "they're biological" and that

a "man without a car is like a clam without a shell." He stated that they were "all getting the point across that if you don't have a car, you're in trouble."

The interrelating between metaphors, but the retaining of the original interpretation was a typical strategy for subjects when they read and listened. Diagramatically, the organizing process could be represented in the following way.



These organizing patterns are significant in that they might provide insight into why most students perceive the greatest number of relationships while reading and listening. When the diagrams were compared, they revealed that the amount and location of the context used, varied with the medium of presentation, and in this way, affected the interpretations of the subjects.

When listening, the subject used the preceding metaphor as the context from which he interpreted the metaphor under inspection. He assimilated the meaning of the preceding metaphor into the interpretation of the metaphor he was trying to interpret. When reading, the subject related each metaphor to the original interpretation he had

presented, using the overall, main ideas as the context for the interpretation of the metaphor. Finally, when reading and listening, the subject incorporated both strategies, and used the context of the previous metaphors, as well as the context of the original interpretation.

As a result, the final interpretations of the poems varied. When reading, or when reading and listening, the final interpretations paraphrased or explicitly stated the original interpretation. When listening, however, the subject proceeded from the original interpretation to metaphor to metaphor. Because of this approach, his final interpretation differed considerably from his first interpretation.

The first two sections of the chapter confirmed the individuality of each subject's responses. Contributing to the uniqueness of the response were the personal sets of cues, and the pattern of organization used when processing metaphor.

The last section of this chapter addresses itself to the differences in the performance of high and low readers, during unaided metaphorical processing, and during probing.

PROCESSING DIFFERENCES BETWEEN HIGH AND LOW READERS

In order to assess the differences between the two groups of readers, the following research question was asked:

> As the medium of presentation is manipulated from reading, to listening, to reading and listening, how do the organizing processes used by high and low readers differ when they attempted to interpret a poem without the aid of probing.

This major question was divided into several questions each addressing themselves to one aspect of the complete organizing process. Each of these questions are stated and then the differences between the high and low readers are reported.

A. Do the interpretations given by high readers reflect more metaphorical processing than those provided by the low readers?

A definite contrast between the high readers and low readers was noted when their interpretations that were presented during the unaided processing were compared. The low readers presented literal interpretations for the poems, despite the presence of several metaphors in each poem, in 45% of their interpretations. This contrasted sharply with the 20% literal interpretations volunteered by the high readers, as shown on the following page in Figure 3.

However, when the low readers were encouraged to process the metaphors during the probing session, they presented more final interpretations that changed from the literal to an interpretation reflecting metaphorical processing. Only 16% of their final interpretations remained literal, and their performance was now similar to that of the high readers. Whereas 88% of the high readers' interpretations reflected figurative interpretations, 84% of the low readers' interpretations now also reflected figurative interpretations. (See Figure 3)

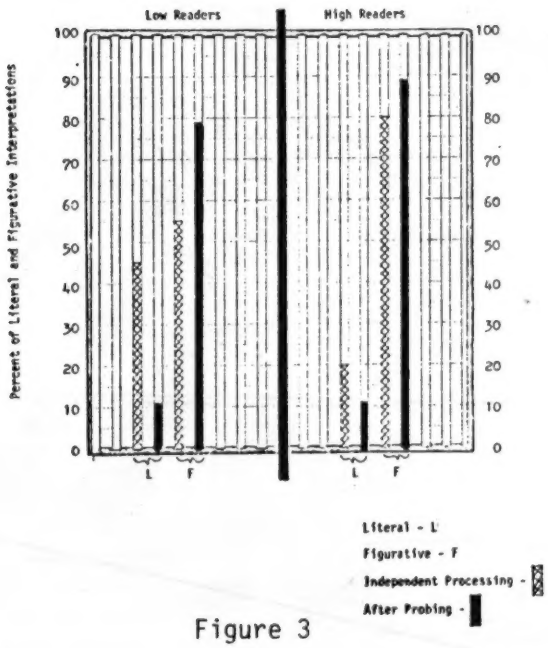


Figure 3

The Per Cent of Literal and Figurative Interpretations Before and After Probing.

The increased insight experienced by the low readers after the probing, made probing an important device for helping them acquire meaning. Independently, without the aid of a person encouraging them to interpret the metaphors, the low readers did not seem to recognize the metaphors, or else rejected them, and reverted to the literal for meaning. Even the high readers, however, presented fewer literal interpretations after the probing (12%) and seemed to benefit from probing as well, although many of them were able to interpret the metaphors independently (as indicated indirectly by their interpretations).

Further evidence of whether metaphors were being processed was found by looking at the tenor/vehicle relationships volunteered by the subjects when they reported the cues they used to develop their meanings. A comparison of the number of relationships is presented in answer to

the next question.

B. Do high readers, as compared to low readers, volunteer a greater number of metaphorical relationships during unaided processing?

Although the high readers did offer more metaphorical relationships (H.R.-47; L.R.-33), the groups contrasted in which medium they presented to most relationships. The high readers volunteered the most when reading and listening (53%). They offered 34% while reading but only 13% while listening. The low readers, while they, too, offered most of their relationships when they were reading and listening (42%), offered only 24% when reading, and 34% when listening. (See Figure 4)

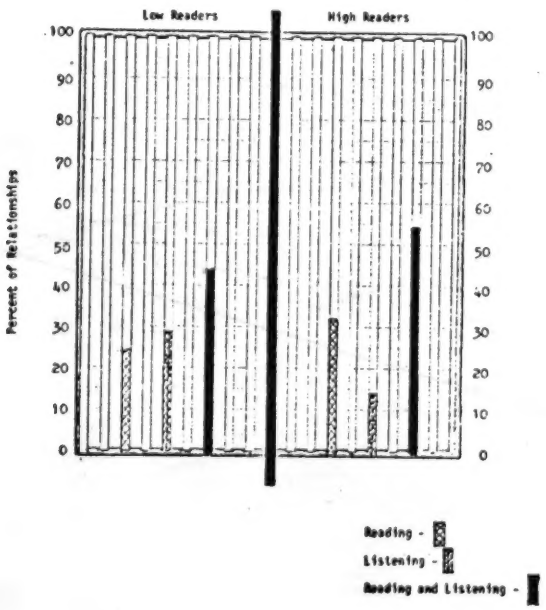


Figure 4

The Per Cent of Relationships Given During the Independent Interpreting of the Poems While Reading, Listening, and Reading and Listening.

As would be expected, the low readers offered fewer relationships when reading. This finding led to further speculation and concern that the relationships noted by one or two subjects might be biasing the findings. When an analysis of the individual responses was made, two high readers (I,K) accounted for 16 of the high readers' 48 responses. Subject L volunteered no relationships while reading and listening, or listening, but did give six relationships when reading.

Of the low readers, subjects A,B and C accounted for 11 of the 14 relationships while reading and listening, while D and H produced none while reading and listening. Subject B accounted for 12 of the low readers' 33 responses and C accounted for 6 responses. (See Figure 5)

Three low readers (A,B,C) provided 11 of the 33 relationships produced by the low readers. These people who gave the most relationships all presented the relationships the most number of times while reading and listening. (A-3, B-5, C-3, I-9, K-7). It was difficult to tell when the other subjects presented the greatest number of relationships because so few of the relationships were volunteered. Clearly though, high readers did not provide many relationships when listening (I-1, J-1, K-1, M-0, N-1, O-0, P-1). (See Figure 5)

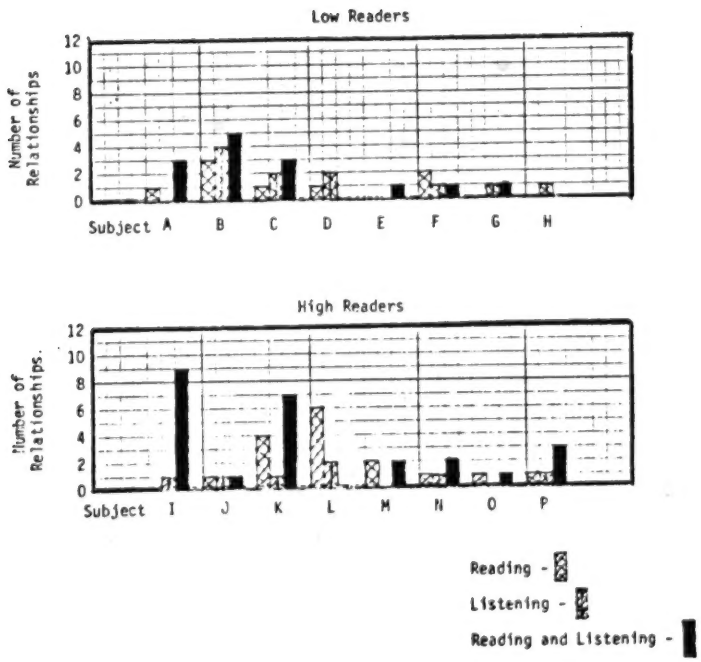


Figure 5

The Raw Number of Relationships Offered By Subjects During the Independent Processing of the Poems When Reading, Listening, and Reading and Listening

That the high readers produced so few relations while listening was an unexpected finding, because the literature suggested that more processing should be occurring during listening. It then occurred to the researcher that the high readers may have previously made the relationships, and did not bother vocalizing them at the time of cue presentation, whereas the low readers were relating the cues at the time they were volunteering them. To test this hypothesis, the cues presented by the high readers and low readers were analyzed. The researcher looked for patterns used by the high and low readers in recalling the information upon which they had formed their interpretation. An analysis of the cue recalls revealed the behavior of the high readers when listening. A possible explanation for the low number of relationships in listening will be offered after the cue analysis.

C. Do high readers use a greater number of cues as a basis for their interpretation?

The high readers did volunteer a greater number of cues (H.R. 130, L.R. 92). Figure 6 outlines a somewhat similar number of cues offered by each of the subjects (A-19, B-15, C-14, D-11, E-6, F-6, G-10, H-11, I-28, J-11, K-16, L-15, M-12, N-13, O-16, P-19). Figure 6 also reveals that the low readers, regardless of the poems processed, offered the greatest number of cues when they were reading (A-10, B-5, C-5, D-4, E-3, F-4, G-1, H-4). However, five of these subjects used an equal number of cues when reading and listening (B-5, C-5, D-4, E-3, G-4). Only subjects B and D consistently used the same number of cues regardless of the medium, and were the only two who did not volunteer fewer cues when listening. Again, a contrast

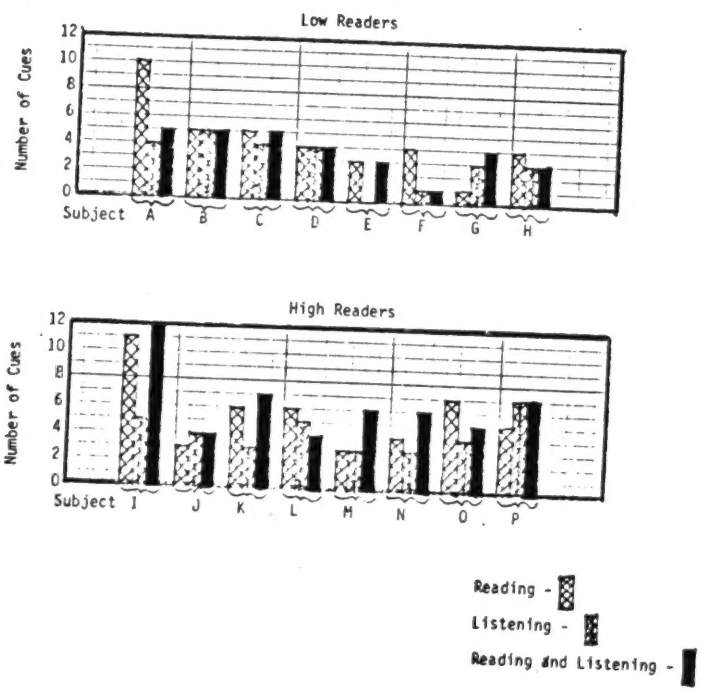


Figure 6

The Raw Number of Cues Offered By Subjects During the Independent Processing of the Poems When Reading, Listening, and Reading and Listening.

occurred when the low readers' performances were compared to the high readers' performances. Three quarters of the high readers offered their greatest number of cues while reading and listening (I-12, J-4, K-7, M-6, N-6, P-7). Only two provided their greatest number of cues while reading (C-6, O-7), and only subjects J and P did not volunteer fewer cues while listening.

To recapitulate, the low readers offered more relationships when they listened than did the high readers when they listened. When they read, the low readers offered the fewest relationships but they volunteered the most cues when they read (40%). The high readers volunteered the most cues when reading and listening (41%). (See Figure 7).

Both groups, though, volunteered the fewest cues when listening (L.R. 22%, H.R. 26%). This finding resulted in the analysis of the information contained in the cues to determine how much relating of information had occurred before the cues were volunteered. How much information the cues of the high and low readers contained is reported in reply to the next question.

D. Do high readers chunk more information into their cues than do low readers?

The high readers offered more complex cue recalls, revealing that they used a greater amount of context or information upon which they based their interpretations. The cues volunteered by the low readers (see Figure 8) were generally more simple, carrying less information. For example, they would often use a cue such as "bird" or "crow" (R 19%, L 25%, R and L 9%). These single word cues were rarely used by the high readers (Reading 2%, R and L 2%) although they

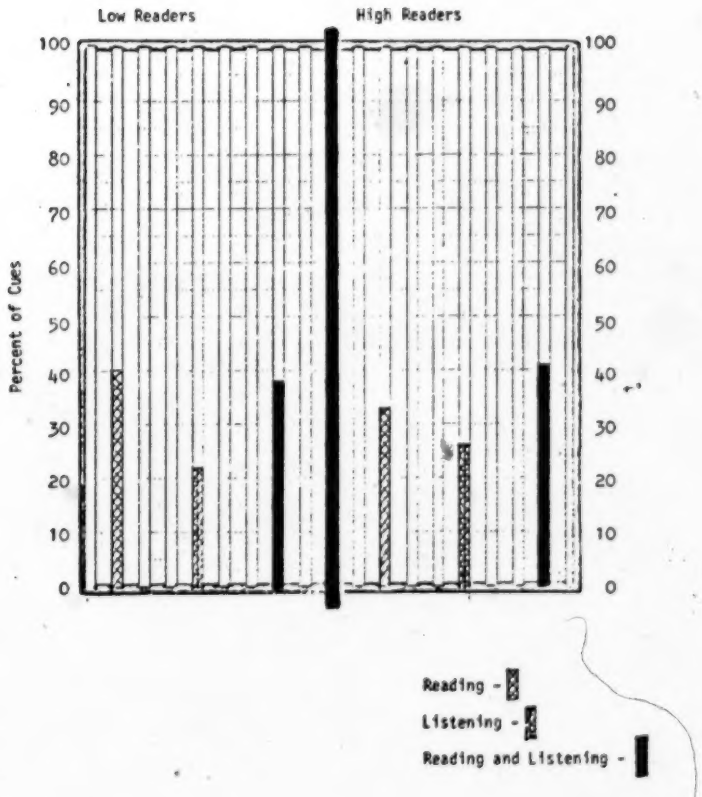


Figure 7

The Percentage of Cues Offered During the Independent Interpreting of the Poems While Reading, Listening, and Reading and Listening

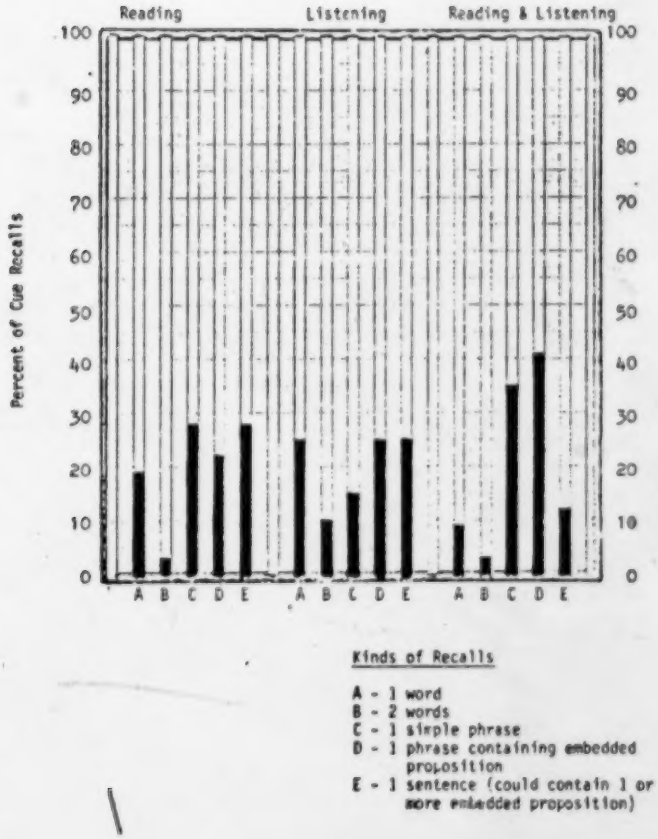


Figure 8

The Complexity of the Cue Recalls of Low Readers

used more of them when they listened (11%). The low readers' performances seemed to alter significantly when they were reading and listening. Although they were fewer sentence responses (12%), they dramatically reduced the number of one or two word responses, using phrases for 76% of their cues.

Figure 9 reveals a different pattern in the cue selection of the high readers. Their performance when reading, or reading and listening was similar. When reading, 46% of their cue recalls were complex sentences, and when reading and listening, 44% of the recalls were sentences. However, when listening, the number of sentence recalls such as "he is raped in desert solitude" dropped to 34% and the number of complex phrases such as "a clumsy crow" dropped to 19%. The remainder of the cue recalls were simple phrases, such as "into the night", and single word cues. While the high readers still did not use as many single word recalls when they listened as did the low readers (H.R.-16%, L.R.-25%), they used far more than in the other mediums. This lack of information may have contributed to their volunteering few relationships when listening, since they recalled not only less complex cues, but also fewer cues.

E. Do high readers as opposed to low readers recall more cues that are specifically stated in the text, more recalls that are paraphrased, or more that are inferred?

Both high and low readers used similar patterns of recall when reading, and when reading and listening. When reading, the high readers' recalls consisted of 85 exact recalls from the text, 15 paraphrased recalls of the text, and 8 inferred recalls (not stated in the text). The low readers presented even more exact recalls from the text (96),

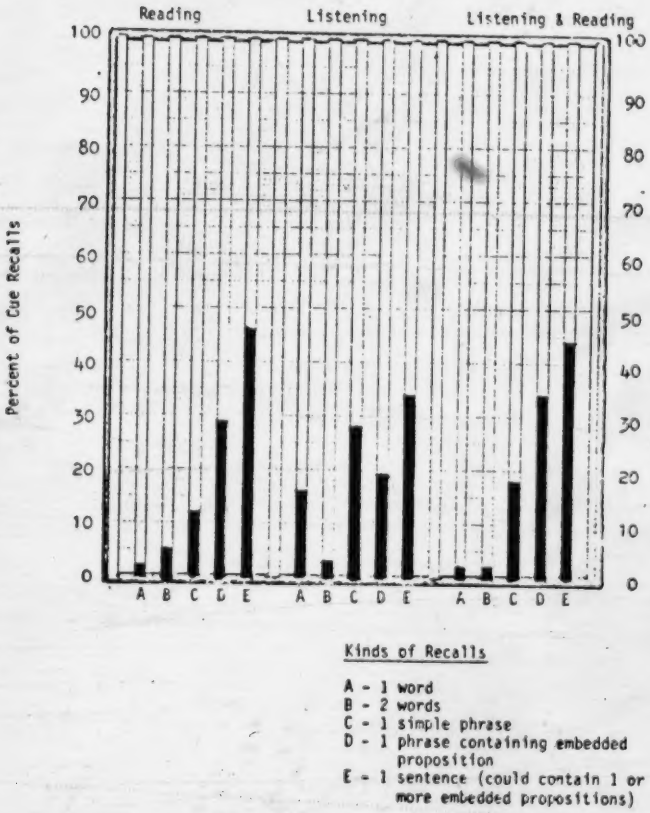


Figure 9

The Complexity of the Cue Recalls of High Readers

but not once did they attempt to paraphrase a cue from the work. Instead they gave a larger number of inferred recalls (10). A similar pattern for both groups can be noted when they read and listened, but the high readers recalled fewer text specifics (83) than when they read, and increased slightly their paraphrased recalls (16) and inferred recalls (9). The low readers recalled 96 text specifics when reading and listening. They still did not recall any paraphrases and still inferred 10 recalls.

Both groups altered their strategies when listening, but a major contrast between the two groups can be noted. Whereas both groups used fewer exact recalls (H.R.-38, L.R.-54), the low readers still attempted to rely on specific recalls. Although the low readers now provided 20 paraphrased recalls, the high readers provided 24. A dramatic difference in strategy concerns the amount of inferred recall. The high readers used 46 inferred recalls and the low readers used 29 inferred recalls. (See Figure 10) This change in strategy may explain in part why the low readers produced more relationships than the high readers when listening. The high readers were making more inferences and may well have already processed the relationships before they volunteered their cues. Their cues revealed a considerable relating of information from different parts of the context; for example, the cue "far back into your mind" for "Night Crow" infers that the reader has taken the cue "deep into the brain far back" and already associated "deep" with "far back", and substituted "mind" for "brain". In this way, the cues of the high readers indicated that they processed relationships before they volunteered the cues. To say they were not processing metaphorical relationships would be false.

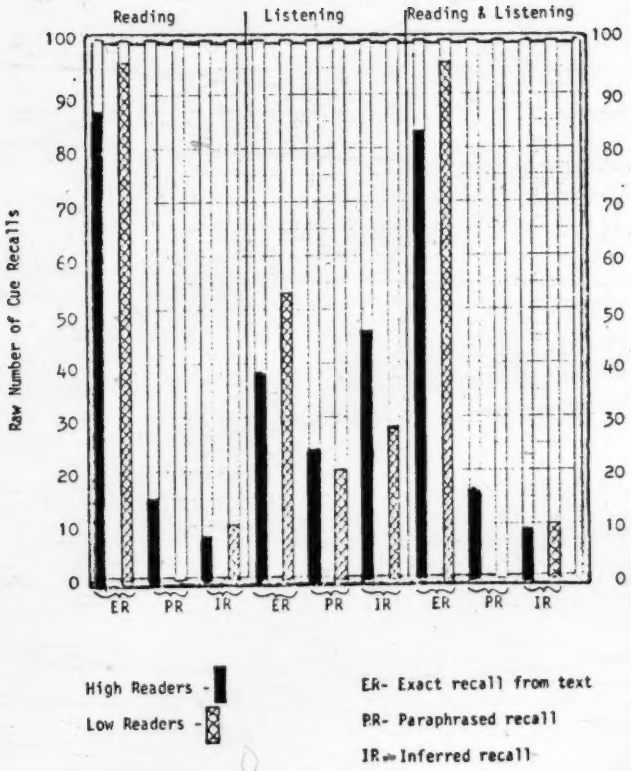


Figure 10

The Raw Number of Cue Recalls Given During the Independent Interpreting of the Poems While Reading, Listening, and Reading and Listening

It may be that the listener does not concentrate so much on picking up cues, as on processing for meaning. He relies heavily on inferences made between specific bits of information, but may not concentrate on as many details in the context. The restrictions caused by memory capacity may hamper the individual's recall of context, and he may resort to inference and paraphrasing. The high group was more able to organize information and retain it, as was noted in their complex cue recalls, but even they have difficulty when listening.

Generally, high readers presented a greater number of cues (L.R. 308, H.R. 327) and related more relationships between ideas. When reading or when reading and listening, they relied heavily on text specifics, but also paraphrased and inferred relationships. The low readers did not attempt to paraphrase when reading, or reading and listening. They relied heavily on text specific information but also inferred some meaning. Their cues reveal they were not relating their ideas as well as the high readers were. When listening, the low readers still tried to recall specific text information but increased their paraphrasing and inferring. Their strategies did not seem as effective as the high readers, however, because they failed to relate as much information. Their inability to relate ideas was re-affirmed by the processing of metaphors during the probed session.

The remainder of this section reports the major differences between high and low readers' processing of individual metaphors, answering the research question posed:

> As the medium of presentation is varied from reading, to listening, to simultaneously reading and listening, what major changes in the organizing processes do high

and low readers make when they are asked to interpret given metaphors within the complete context of the work?

This major question was divided into a series of sub-questions. The findings are summarized under each of these questions.

A. Do high readers and low readers attempt similar organizing processes when they are asked to provide tenors for given vehicles?

In every case, the subject attempted a response when a vehicle was provided for him. The responses, though, varied greatly. When the tenors and relationships were categorized according to whether the metaphor had been rejected, assimilated, or accommodated, the high readers could accommodate the metaphor more often; that is, they could provide a tenor that contrasted with the vehicle, and they could list at least one common characteristic of the tenor and vehicle. The high readers were able to accommodate 135 metaphors by providing a disparate realm and commonalities. For 15 additional metaphors, they were able to provide a disparate realm, but could not explain the commonality between the objects. Only on four occasions did they attempt to provide a tenor that represented a larger category of the vehicle. The embedded tenor, and the vehicle were then discussed in terms of their commonalities. Only twice did they embed the vehicle into a larger tenor and not provide any commonalities.

The high readers did reject some of the metaphors. They insisted, on seven occasions, that the metaphor was a literal expression and on six occasions, while they stated that a metaphor existed, they could not provide a tenor. (See Table 3)

Table 3

How High Readers Relate Tenors to Vehicles

Reader	Rejection	Assimilation			Accomodation	
	Literal	Recognition but No Tenor	Tenor and Relationships (Embedded)	Tenor Only	Tenor and Relationship (Contrasted)	Tenor Only
I	2	1	0	0	20	0
J	1	1	0	0	23	1
K	0	0	1	0	20	3
L	1	0	0	0	9	1
M	0	1	0	1	13	2
N	1	1	0	0	15	5
O	2	2	0	0	18	3
P	0	0	3	0	17	0
Total	7	6	4	2	135	15

The high readers rejected fewer vehicles than did the low readers, and accommodated more vehicles. Whereas the high readers completely accommodated 135 metaphors, the low readers accomodated only 78 metaphors by giving an unlike vehicle and common characteristics. On 16 occasions, the low readers were able to provide a disparate realm but could not indicate the commonalities shared by the realms.

A greater occurrence of embedded relationships was noted with the low readers (14). Most significant, however, was the low readers' incidence of rejection of the metaphors. Whereas they stated the interpretations were literal 10 times, they differed from the high

readers in that for 21 metaphors, while they could recognize a metaphor was present, they could not explain what the vehicle was being compared to. They indicated this recognition by saying something like "I know it was something, but I don't know what." Table 4 summarizes the results.

Table 4

How Low Readers Relate Tenors to Vehicles

Reader	Rejection		Assimilation		Accomodation	
	Literal	Recognition but No Tenor	Tenor and Relationships (Embedded)	Tenor Only	Tenor and Relationship (Contrasted)	Tenor Only
A	0	2	1	0	20	1
B	0	1	1	1	17	1
C	1	8	0	1	8	8
D	4	3	1	0	8	3
E	1	0	1	1	2	0
F	1	2	0	1	11	0
G	1	1	2	0	6	1
H	2	4	1	3	6	2
Total	10	21	7	7	78	16

As shown in Figure 11, the low readers rejected the metaphor 22% of the time, while the high readers rejected the metaphor only 6% of the time. Embedding occurred in 14% of the low readers' responses, but in only 5% of the high readers' responses. Whereas the high readers accommodated 91% of the vehicles, the low readers could accomodate only 68%.

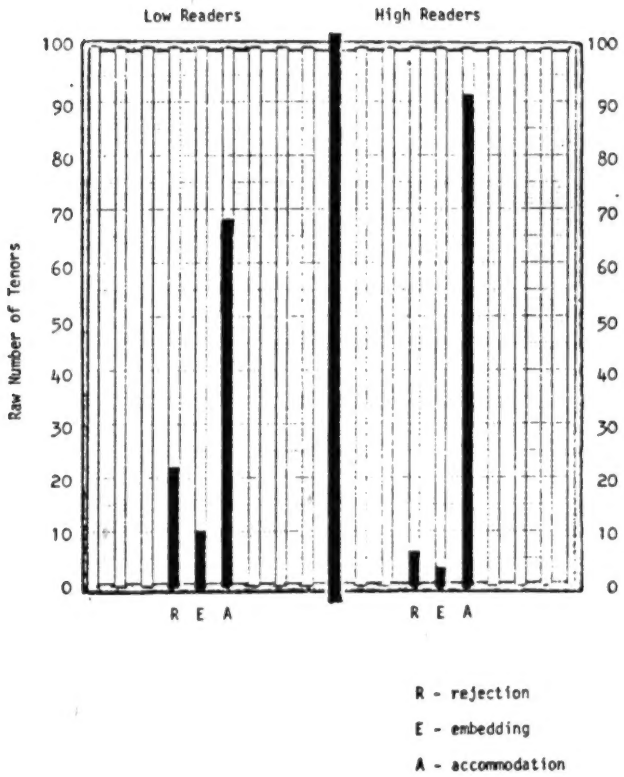


Figure 11

The Method Used by High and Low Readers to Provide Tenors When Processing Metaphors During Probing.

B. Do high readers provide a greater number of relationships between vehicles and tenors?

While all students were capable of accomodating, the high readers provided many more tenors, relationships, and accommodations. Figure 12 shows that both groups provided the greatest number of relationships when reading and listening (L.R.-32, H.R.-52).

Figure 13 gives the number of metaphors each student was able to accommodate by giving at least one relationship. Though the high readers seemed able to relate well regardless of the medium, only

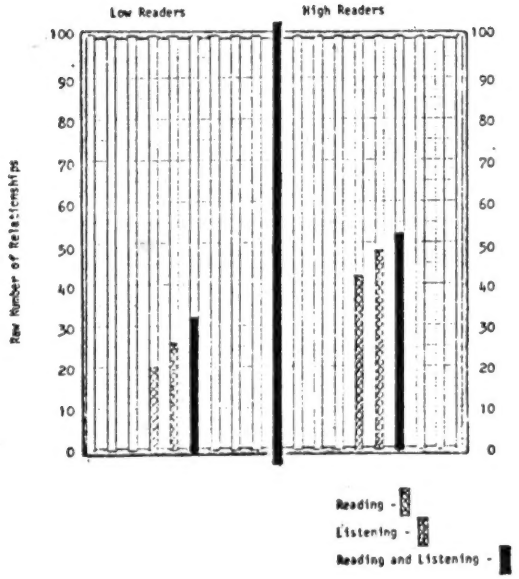


Figure 12

The Raw Number of Relationships Provided Between Tenor and Vechile When Interpreting Metaphor During Probing While Reading, Listening, and Reading and Listening

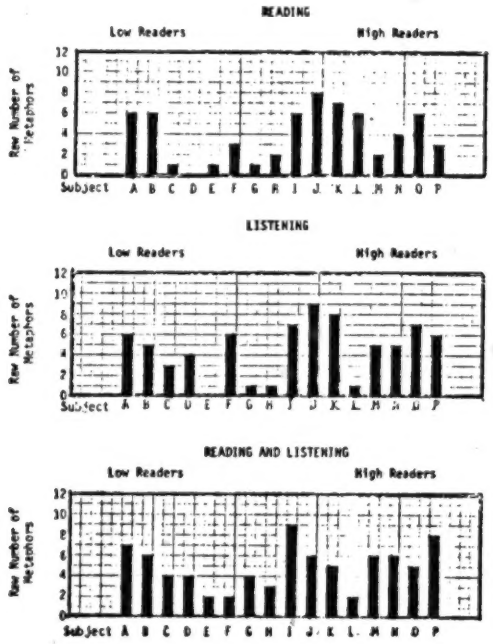

READING
Low Readers
High Readers
Raw Number of Metaphors
Subject A B C D E F G H I J K L M N O P
LISTENING
Low Readers
High Readers
Raw Number of Metaphors
READING AND LISTENING
Low Readers
High Readers
Raw Number of Metaphors
Subject A B C D E F G H I J K L M N O P

Figure 13

The Raw Number of Metaphors Accommodated By Giving at Least One Relationship While Reading, Listening, and Reading and Listening

1 high reader seemed able to find the most relationships when reading (L-6). Three provided the most when listening (J-9, K-8, O-7), and four when listening and reading (I-9, M-6, N-6, P-8). Eight of the subjects, half high readers and half low readers, experienced the largest number of non-relationships when reading.

Not one of the low readers showed the greatest number of relationships when reading. Five of the eight subjects could completely accommodate the metaphor the greatest number of times while reading and listening (A-7, C-4, E-2, G-4, H-3). Only one gave the greatest number when listening (F-6).

The high readers clearly provided more tenors and relationships than did the low readers. The low readers could supply 141 tenors and 163 tenor/vehicle relationships. Table 5 summarizes the responses of the low readers.

Table 5

The Number of Tenors and Relationships Provided by Low Readers

Subjects	A	B	C	D	E	F	G	H	Total
Tenors	27	24	25	12	7	14	13	19	141
Relationships	40	35	13	16	14	18	12	15	163

The high readers,on the other hand,were able to give 205 tenors and provide 252 tenor/vehicle relationships. Table 6 summarizes the high readers' responses.

Table 6

The Number of Tenors and Relationships Provided by High Readers

Subjects	I	J	K	L	M	N	O	P	Total
Tenors	33	34	30	14	20	18	30	26	205
Relationships	55	39	39	10	22	23	30	34	252

A major difference in the number of tenors volunteered for one vehicle also occurred. Figure 14 reveals that the high readers used 19 two-tenor relationships, and 10 three-tenor relationships.

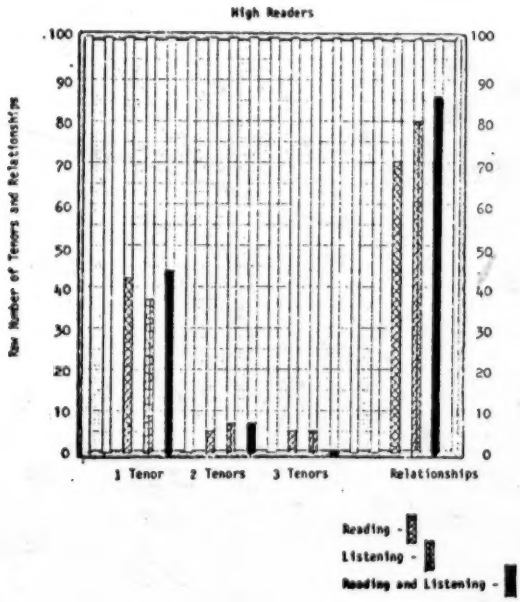


Figure 14

The Number of Tenors and Relationships Given by High Readers While Interpreting Metaphor During Probing While Listening, Reading, and Reading and Listening

Figure 15 reveals that the low readers gave 15 two-tenor relationships but only 2 three-tenor relationships. Both groups provided the most tenors and relationships when reading and listening (L.R.: 45 tenors; 65 relationships. H.R.: 51 tenors, 86 relationships).

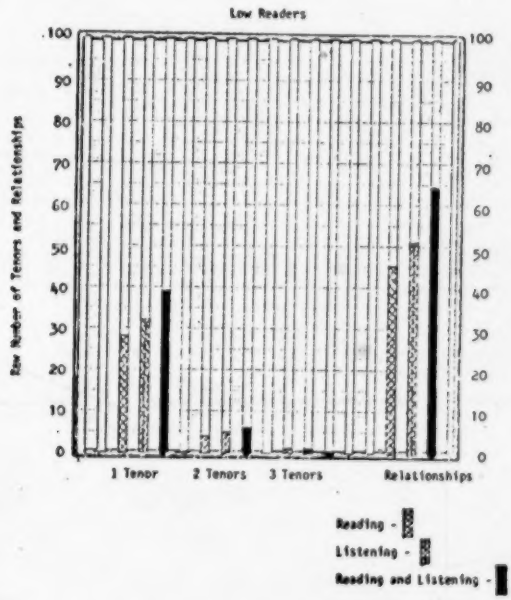


Figure 15

The Number of Tenors and Relationships Given by Low Readers When Interpreting Metaphor During Probing While Reading, Listening, and Reading and Listening

C. Do high readers provide more abstract relationships between the vehicles and tenors?

On a scale of concrete to abstract, the low readers tended to have more responses centered at the concrete end of the continuum. They, however, were capable of discussing ideational concepts and often did. The high readers tended to have more responses on the abstract end of the continuum, although they, too, had many concrete reactions.

No definite division between the high and low readers could be made. For example, low readers gave concrete responses such as "bright flowers", "man", and "mother". High readers gave concrete responses such as "crow", "people" and "supermarket". Low readers provided abstract responses such as "death", "ambition", "dream" and "life" while high readers used "brainwashing", "goals" and "subconscious". On a continuum from concrete to abstract, while the high readers may be reaching a greater degree of abstractness, no definite division is apparent.

D. How does the processing of the metaphor affect the emotional reaction of the high readers compared to the low readers?

Both high and low readers seemed to be affected by the metaphorical probing. The low readers gave no emotional response 21% of the time before probing. The high readers gave no response only 14% of the time before probing. After the probing, only 16% of the responses of the low readers were "no feeling", and only 4% of the high readers' responses were "no feeling". (See Figure 16)

The high readers seemed to change their feelings the most. After probing, 55% of their responses had indicated a change of feeling. The low readers changed their responses 39% of the time. This change seems to suggest that not only poor readers, but good readers as well, benefit from probing, and tend to alter their feelings as they process the metaphors within a poem. This change in emotion, experienced by a high reader, may be observed in the responses given for "Night Crow", provided on page 125.

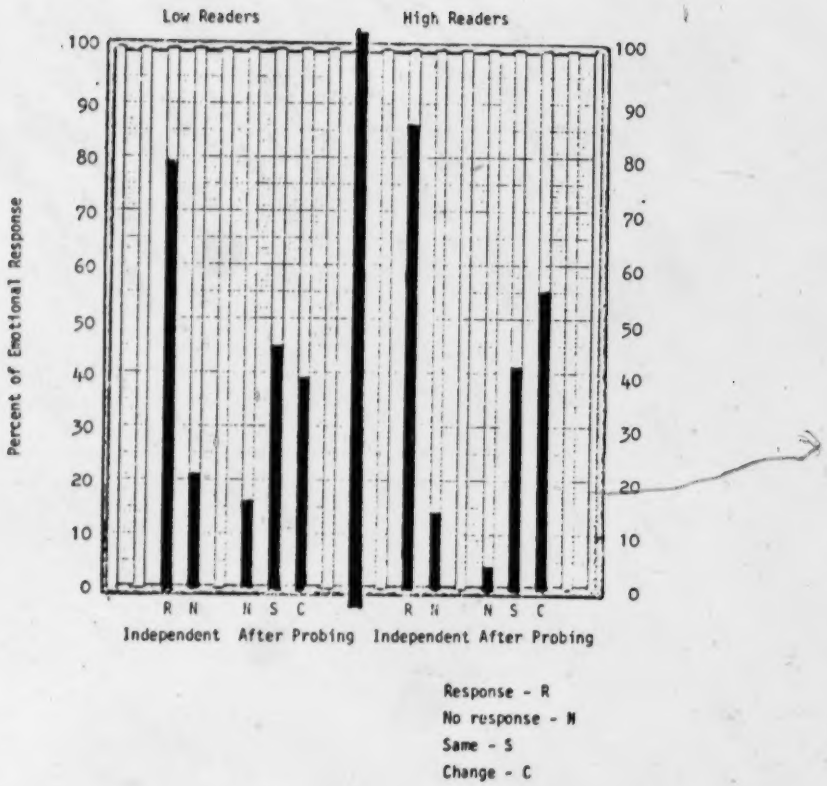


Figure 16

The Per Cent of Emotional Responses Given Before and After Metaphorical Probing

Meaning (Unaided Processing)	Affect
This guy is watching this crow and he flies off a wasted tree and then a shape in the mind rose up. He's starting to get these images of a tremendous bird in his mind. Some really big bird flying back and back into the reaches of his mind as he returns to reality.	Makes me think, imagine a care-free bird.
Meaning (Probed	
1. People have all these different kinds of dreams.	
2. He's trying to make the crow seem larger. Might be his dreams. He had large dreams and then he's returning to reality and his dreams are becoming further and further away. His dream -- it's getting harder and harder to see the end results. You shouldn't really set your goals that high because you might lose sight of what you're trying to set for yourself.	hopelessness
3. When he sees the crow flap from a wasted tree, that might be his attempts to rise himself up, and then wasted tree may be wasted efforts and the tremendous bird is his hopes and dreams and they're flying away because maybe he's failed at his attempts, and he feels like everything seems hopeless.	sympathy for that person

It also seems that the cognitive processing and the affective processing form a complex interrelationship -- one seeming to color the other. The feeling of hopelessness seemed to influence the interpretation, and the word is even mentioned in the interpretation. Taken together, the affect and the ideas produce the final reaction of sympathy.

A further indication of the complex interdependence of the

affect and cognitive processing was noted when the organizing processes to find meaning for the metaphors broke down. Then there seemed to be no feeling or only a feeling of confusion, as if the struggle to find meaning interfered with the emotional reaction of the subject. This kind of reaction was typical of the low readers, and may be observed in the following example of a low reader's responses:

Meaning (Independent)	Affect
I don't understand the poem. If I knew what thought wing and hope bud were, maybe ...	very confused

Probing:

Q: What is "thought wing" being compared to?

A: Don't know.

Q: What is "hopebud" being compared to?

A: Don't know.

Q: What is "raped in desert solitude" being compared to?

A: Don't know.

Q: What is "Moses or star" being compared to?

A: Don't know.

Q: Who is "he" in the last line referring to?

A: Man. Well, they're saying about man ... I'm not sure. — none

This same pattern occurred with the high readers, as well, when they could not explain the meaning of the metaphors. It seems that so much time is being spent on decoding the information that the

emotional reaction is being lost, or that the cognitive message carries within it the cues for affect and when they cannot be interpreted, they do not cue the emotional reactions. In turn, the emotional reaction cannot color the interpretation and total breakdown in communication results.

A further difficulty displayed by both groups was their inability to communicate their emotional reactions. Some preferred to give an idea rather than an emotional reaction, such as, "Cars are wicked because man made them that way". When the researcher encouraged them to give their feelings, they would then give an emotional reaction. The subject who stated, "Cars are wicked...", then replied, "disappointed". Some subjects, however, asked what was meant by "feelings" or "emotions" and even after these were explained, found it difficult to react emotionally. One subject said, "I hate this question" when asked for the second time, "How does the poem make you feel?" Both high and low readers, then, displayed difficulty in communicating their emotional reactions, or a reticence to do so. When they did react, most of the responses were basic, general terms such as sad, happy, upset, scared, glad, mad, or good. If indeed, the affective response helps to color an interpretation and aids in cognitive organizing, then this basic reticence or inability to convey emotion may seriously interfere with the metaphorical processing of the subject.

In most cases, the medium of presentation seemed to have little effect upon the emotional reactions of the subject. For example, the following emotional reactions were given for "Contemporary Man":

Reading	Listening	Reading and Listening
depressed	sad and lonely	sad
upset	sad	sad
worried	confused	no hope
hope	wonder	lost
confused	mad	scared

However, one noticeable difference was that both high and low readers tended to give the response of, "no feeling" most when reading, twice as many times as this same response when listening, and twice as often as this response when reading and listening. Through the metaphorical probing most of these beginning no response reactions were changed, except when metaphorical relations could not be provided.

A SUMMARY OF THE DIFFERENCES BETWEEN HIGH AND LOW READERS WHEN READING, LISTENING, AND READING AND LISTENING

The high readers processed metaphor differently from the low readers in that:

1. The high readers attempted metaphorical interpretations more often without the aid of probing.
2. The high readers used a greater number of cues that were more complex, and that contained information which had been chunked across lines in the poem.
3. The high readers, when listening, gave cues that revealed a change in organizing strategies. They inferred and paraphrased ideas more than when they read, or read and listened. The low readers tended to remain inflexible.

4. During probing, the high readers accommodated the metaphors more often by providing disparate tenors. They also offered a greater number of relationships between tenors and vehicles. The low readers rejected the metaphor more often. Sometimes, they embedded the vehicle into a larger similar category instead of providing a disparate tenor. Often, they had difficulty telling what the vehicle and tenor had in common, even though they could provide a tenor.

In that both groups provided most relationships when reading and listening, this combination of media seemed to be the most effective form of presentation for the interpreting of metaphor and poetry.

CHAPTER FIVE

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

Chapter five first summarizes the study and its findings. Then the chapter discusses the implications of the findings for the teaching of metaphor in poetry. Lastly, it outlines further research that should be undertaken and the conclusions of the study.

SUMMARY

The study examined the responses of sixteen grade ten subjects in order to answer the following research questions:

1. Are grade ten students' metaphorical interpretations original, and if so, what contributes to the originality?
2. What kind of organizing processes were used by tenth grade students in interpreting metaphor?
3. As the medium of presentation is changed from reading, to listening, to simultaneously reading and listening, what major changes in organizing processes do high and low readers make when they attempt to independently interpret a poem?
4. As the medium of presentation is varied from reading, to listening, to simultaneously reading and listening, what major changes in the organizing processes do high and low readers make when they are asked to interpret given metaphors within the context of the complete work?

Each subject interpreted six poems, two he had read, two he had listened to, and two he had simultaneously read and listened to.

After the presentation of each poem, the subject answered questions that had been designed to elicit first, the interpretation of the poem and the feelings generated by the poem. The questions then probed the meaning the individual had for each metaphor, the final interpretation he believed the poem to have, and his final emotional reaction to the poem.

The findings of the study are summarized in the following three sections of this chapter. The uniqueness of meaning that was observed, regardless of the medium of presentation, is summarized in the section below.

ORIGINALITY OF INTERPRETATIONS

All subjects volunteered personal interpretations for each poem. The interpretations were influenced by the original cue sets that provided personal contextual frameworks from which the meanings were created. The choice of cues within the cue set was, in turn, influenced by the medium of presentation. While the study did not establish why a cue was selected in one medium but not in another, it did reveal that particular cues were chosen only when the subject had read, or listened to, or simultaneously read and listened to the work.

The metaphorical interpretations were also personal creations of the subjects. What interpretation was chosen was affected by the medium of presentation, which influenced what context was used as a framework for the selection of meaning for the metaphor. How the medium affected the subject's interpretation of metaphor is summarized in the next section.

THE INFLUENCE OF THE MEDIUM OF PRESENTATION

Three major patterns of organization used in processing

metaphor emerged from the responses of the subjects. When reading, the subjects interpreted each metaphor by relating the metaphor to the original interpretation given before the probing had started. When listening, the subjects interpreted each metaphor by relating it to the previous metaphor. In this way, the final interpretation of the poem always differed from the original interpretation. When reading and listening, the subjects combined both organizing strategies. The meanings of the metaphors were related to each other, and each metaphor was related to the original interpretation. The final interpretation always paraphrased or stated explicitly the original interpretation.

In this way, the medium seemed to affect what contextual framework was being used to provide the interpretation. When listening, the subject tended to use the immediate context of the last metaphor in order to explain the relationships and meanings of the metaphor of concern. A greater dependence on the overall context of the work was noted in relating the metaphor to the work while reading, whereas a combination of the overall context and the immediate context was used when reading and listening. This pattern indicates that the context of the work is crucial and the medium of presentation seems to influence the metaphorical interpretation.

HIGH AND LOW READER DIFFERENCES

The high readers attempted metaphorical interpretations more often than the low readers, when they processed the poems without the aid of probing. They used a greater number of cues which were more complex in that the cues contained more information which had been chunked across lines in the poem. In this sense, the high readers

used more contextual information than did the low readers, even though both groups most often volunteered only two or three cues as the basis for their interpretations. The limited contextual information used by the low readers may have interfered with their recognition and interpretation of the metaphor.

During probing, the high readers accommodated the metaphors more often; that is, they provided disparate tenors for the vehicles and provided relationships between the tenor and vehicle. They also noted a greater number of relationships between tenors and vehicles than did the low readers. The low readers tended to reject the metaphor, by insisting the metaphor should be interpreted literally, or by acknowledging the metaphor but being unable to provide a tenor or relationship. The low readers also embedded the vehicle into a larger similar category instead of providing a disparate tenor, more often than did the high readers. Even when the low readers could provide a tenor for the vehicle, they often could not note what the two realms had in common.

While both high and low readers were influenced by the medium of presentation, they were influenced somewhat differently. When reading, and when reading and listening, the high readers mostly relied upon the exact recall of explicitly stated information, but also paraphrased some of the ideas, and inferred a limited number of ideas. The low readers, however, relied extremely on the exact recall, and while they inferred some ideas, never paraphrased any of the ideas in the poem.

When listening, the high readers used cues that revealed a change in organizing strategies. They resorted to inferring ideas and paraphrasing ideas, reducing the number of exact recalls. The low readers, on the other hand, while they used more inference and now paraphrased some

ideas, tended to remain far more dependent upon the exact recall of information that was stated explicitly in the poem.

Generally, both groups seemed to benefit from simultaneously reading and listening. Both groups were able to relate ideas best when reading and listening, but identified the fewest relationships when reading.

In conclusion, each medium seems to offer a different strength in processing. Reading seems to aid memory, since memory can retain only a limited amount of incoming information. Listening, on the other hand, encourages the relating of information through a chunking process. Reading and listening combines the advantages of both media. Yet, one or two subjects provided exceptions to the overall group performance for readings and listening. One high reader consistently achieved more relations when she listened. Why this was so, when others found listening so difficult, may relate to memory, but could not be answered by this study.

IMPLICATIONS FOR TEACHING POETRY

While teachers should encourage the use of contextual details, and provide practice in incorporating several contextual cues into the meaning of a work, they should also be sensitive to the personal meaning a metaphor, or a poem, has for a student. If teachers encouraged students to become metaphor synthesizers; that is, creators of meaning, the students might respond with greater emotional and intellectual involvement, both crucial for metaphorical interpretation. This might be accomplished by first presenting the definition of metaphor in behavioral terms which emphasizes the processes that must be used by

the interpretor to find meaning for metaphor. Once a student realizes that his interpretations will be personal, he may be stimulated into finding various tenors that might be compared to a vehicle, and relationships that are commonalities between the disparate realms.

The students would need to realize, however, that their ideas would be accepted as worthwhile contributions. Such a procedure would require an open atmosphere in the classroom that provides intellectual stimulation through a discussion of ideas.

Such a procedure would benefit the low readers as well as the high readers. Low readers tend to be inflexible in their relating of ideas, and they could benefit from experiencing how a number of relationships might occur within a poem. The low readers should be encouraged to make multi-relationships, and to show how each different relationship might provide alterations of the meaning of the metaphor. In this way, they could be inductively led into realizing that one poem could contain the potential for many meanings. Such a procedure would help them realize that the power of poetry lies in its multi-meanings.

The low readers exhibited difficulty in explaining metaphors and, therefore, tended to reject the metaphors. Their difficulty seemed to be the result of an inadequacy to remember a sufficient amount of related information. They cued upon only two or three simple cues, limiting their use of context to help them make relationships. Teachers should encourage low readers to cue on larger chunks of information, which can be processed more easily than can many small particles of information. The students should be given practice in recalling such cues with encouragement to choose cues from the overall

poem. They could also be encouraged to paraphrase the author's words when reading, or reading and listening. In essence, the low readers should be taught organizing strategies that would help them relate their ideas, so that they could improve their ability to recall the context and experiences needed to interpret the metaphors.

High readers related many of the ideas of the work into two or three cues that could be readily processed by their memory mechanisms, and easily recalled. Nevertheless, probing encouraged both groups to make more relations than they had already made. Such a procedure was necessary to help the low readers make relationships, and it encouraged the high readers to produce more relationships, providing a richer vicarious experience for them.

The study suggests that simultaneously listening to and reading poetry fosters the most metaphorical interpreting for students, given some exceptions. This point does not necessarily suggest that all poems should be presented through reading and listening. It does suggest, however, that teachers should be sensitive to the difficulty the medium of presentation does provide, and help students to overcome these problems. Students could be taught to especially look for relationships when they read, and to try to relate the meanings for the various metaphors.

If students were made aware of the limitations and strengths of the various media, they could learn to use these strengths and reduce the limitations. For example, although it is unclear whether children can be taught to alter their strategies and be more successful when listening, it is clear that the least amount of relating occurs when listening. The students use fewer complicated cues of information,

paraphrasing into simpler ideas, and inferring meaning as they process the information. Students could possibly be taught how to improve their chunking strategies when listening to aid their remembering of the overall context of the work.

Reading, alone, tended to interfere with the findings of relationships between ideas, and listening, alone, tended to interfere with the overall contextual influence. Taken together, the combination of the two perceptual worlds seems to allow the greatest potential for meaning. If only one medium is available, students should know how to compensate for the limitations it brings to the task.

FURTHER RESEARCH

This study has been a descriptive analysis of the metaphorical processing of a very limited number of subjects. Further research with larger numbers should be attempted to determine if these suggested patterns do exist. As well, this study has raised several questions that might be researched:

1. Because so few attempts to explain the metaphors within the work were made by the subjects during the independent processing of the poems, the researcher questioned whether subjects actually process metaphor in detail when processing for meaning. It may be that metaphors are used as general cues for meaning and emotion, and that subjects come back to process them only when required to do so, or when a confusion in meaning occurs. A question requiring further research, then, is to what extent a successful processor independently interprets the metaphors when he is engaged in finding the meaning of the poem.

2. Although the poems were short, the researcher noted that the subjects seemed to forget what interpretations they had previously given, especially when listening. The same pattern was noted when the subjects attempted to recall cues upon which they had based their interpretations. It may be that the amount of context used by the subject as the frame for his interpretation is dependent upon his ability to remember. To what extent the amount of context used is dependent upon a subject's memory capacity should be questioned.
3. Related to memory, seems to be the ability to organize and store information. The high readers always seemed to relate the incoming information more efficiently. How these successful organizers relate information quickly and efficiently should be studied.
4. The strategies used when listening altered drastically for all subjects. They tended to paraphrase more, to make more inferences, but to see fewer relationships when interpreting metaphor. It may be that listening requires a different form of mental processing from reading. On the other hand, lack of practice may be responsible for an inability to listen. This concern could be answered by observing the differences in strategies used in reading, listening, or reading and listening, after instruction and practice in organizing information while listening were given.
5. All of the subjects seemed to interpret metaphor in terms of a range of comparisons, from concrete to abstract. It would be interesting to observe what changes metaphorizers make in their interpretation of a metaphor when the same metaphor is placed within a different context.

6. In almost all cases the high readers were able to provide tenors and show multi-relationships between the vehicle and tenors of a given metaphor. Many of the poor readers, on the other hand, had difficulty relating ideas and could not give the relationships between the vehicle and tenors of a given metaphor. How the ability to organize and relate ideas correlates with the ability to interpret metaphor should be questioned.
7. Lastly, an interesting question concerns whether adults process metaphor differently from high school students. It may be that more relationships are seen in a metaphor with an increase in age. In that there seems to be stages of metaphorical development that may extend into adulthood, in what ways adults process metaphor differently from high school students, should be observed.
8. Since most of the successful processors gave multi-meanings and relationships in interpreting the metaphor, it would be important to observe how student performance would change when children were taught to look for many divergent meanings rather than single interpretations. That is, it would be important to determine to what extent flexibility and the ability to keep tentative alternatives in mind account for the ability to interpret metaphor.
9. In that a breakdown in cognitive processing seemed to lead to a lack of emotional reaction, how the emotional reaction and the cognitive understanding of the work are related should be observed.

CONCLUSION

The findings of this study suggest that grade ten students create highly personal meanings for metaphors and for poems. Each

subject provides a personal, contextual framework from out of which he provides meaning for either the metaphor, or the poem. What cues contributing to the contextual framework will be chosen, and how they will be related, seems to be affected by the personal experiences of the subject, the relating ability of the subject, and by the medium of presentation.

The medium of presentation affects the interpretation by influencing the amount and position of the context used to determine meaning. As a result the metaphorical interpretations paraphrase the original interpretation given by the subject if he is reading or reading and listening. However, if the subject listens to the work, each of his metaphorical meanings do not paraphrase the original interpretation. Rather their meanings evolve from the previous metaphor. In other words, he relates metaphor to metaphor, rather than relating metaphor to main idea. As a result, the listener's final main idea differs substantially from his original interpretation. The change in interpretation does not necessarily imply a deeper level of interpretation, since some subjects began with a literal interpretation, and ended with a literal interpretation, regardless of the change in meaning.

The subjects, on the other hand, noted the fewest relationships when they read, and more literal meanings were provided. The emotional response, "no feelings" was also most prevalent when the subject read the work. Most students, especially the high readers, related the most when reading and listening: they were able to use more cues, relate them more complexly, and provide a greater number of tenors and tenor/vehicle relationships.

Encouraging the student to consider each metaphor within the

work provided a greater interaction of the subject with the poem, and produced emotional involvement where none had been present in the unprobed situation. In that the emotional reaction to each metaphorical-interpretation seemed to interact with, and color the remaining interpretations, probing is an important technique for encouraging such an interaction between thought and feelings.

Finally, all of grade ten students were capable of abstract thought. The high readers differed from the low readers in that the high readers could relate material more effectively. They consistently used more cues from the content, and related more information within the cues. They provided more tenors, as well as more tenor/vehicle relationships, and they accommodated more metaphors. As a result, they were more likely to provide abstract ideas.

To conclude, the ideas of Swanson (1966) are reiterated by this study. In interpreting metaphor, the re-arranging of ideas is a personal process for the metaphor synthesizer. The context provides an important filter, but does not confine the metaphor-synthesizer to one meaning. He must, as Bruner (1962) suggests, "go beyond the information given". Teachers should encourage students to do so.

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APPENDICES

APPENDIX A

POEMS

NIGHT CROW

When I saw that clumsy crow
Flap from a wasted tree,
A shape in the mind rose up:
Over the gulfs of dream
Flew a tremendous bird
Further and further away
Into a moonless black,
Deep in the brain, far back.

MAN ON WHEELS

Cars are wicked, poets think.
Wrong as usual. Cars are part of man.
Cars are biological.
A man without a car is like a clam without a shell.
Granted, machinery is hell,
But carless man is careless and defenseless.
Ford is skin of present animal.
Automobile is shell.
You get yourself a shell or else.

THE RED WHEELBARROW

Poem 21 from Spring and All

so much depends
upon

a red wheel
barrow

glazed with rain
water

beside the white
chickens

CONTEMPORARY MAN

The thought wing
cracked and clipped
the footprint erased
and hope-bud shrunk
no Moses or star
patience and courage
any thirst to quench
desireless of the morn
he is raped
in desert solitude.

THE TELEVISION

Unaccustomed
to movement
and real life
it crept
to the window
and
delicately
lifting the blind
with a long
aluminum
tentacle,
sat
looking out
at the night.

THE FIRST THIN ICE

Tonight
our lovemaking

ducks
walking warily
the first thin ice
of winter.

APPENDIX B

QUESTIONS USED IN THE INTERVIEW

Questions on "Night Crow"

Independent Interpretation

1. How does the poem make you feel? Is there anything else?
2. What meaning did you get from the poem? Is there anything else?
3. Tell me how you got that meaning. Is there anything else in the poem that influenced your meaning? If so, how did it contribute to your meaning?
4. How does the poem make you feel now?

Probing Questions

1. What is that "clumsy crow " in "clumsy crow flapping from a wasted tree" being compared to? Is there anything else?
2. In what ways are they similar? (Or what do they have in common?)
3. How does this comparison contribute to the meaning of the poem?
4. How does this comparison contribute to the feelings that you get?
5. In "over the gulfs of dream" in "gulfs of dream", what is being compared? Is there anything else?
6. In what ways are they similar? (Or what do they have in common?)
7. How does this comparison contribute to the meaning of the poem?

8. How does this comparison contribute to the feelings that you get?
9. What is "a tremendous bird" being compared to? Is there anything else?
10. In what ways are they similar? (Or what do they have in common?)
11. How does this comparison contribute to the meaning of the poem?
12. How does this comparison contribute to the feelings that you get?
13. In "moonless black deep in the brain", what is being compared? Is there anything else?
14. In what ways are they similar? (Or what do they have in common?)
15. How does this comparison contribute to the meaning of the poem?
16. How does this comparison contribute to the feelings that you get?
17. In what ways are all of these comparisons related? How does this relationship add to the meaning of the poem?
18. How does the title relate to the poem?
19. How does the poem make you feel now?
20. Is there anything you would like to add to your meanings?

Questions On "Television"

1. What does the it refer to?
2. What is "it" being compared to? Is there anything else?
3. In what ways are they similar? Is there anything else?
4. What does this comparison contribute to the meaning of the poem?
5. How does this comparison contribute to the feelings that you get?
6. How does the poem make you feel now? Is there anything else?
7. Is there anything you would like to add to your meaning?

"Man on Wheels"

1. In the line "cars are wicked", what are cars being compared to? Is there anything else?
2. In what ways are they similar?
3. How does this comparison contribute to the meaning of the poem?
4. How does the comparison contribute to the feelings that you get?
5. In "cars are a part of man" what are the cars being compared to? Is there anything else?
6. In what ways are they similar?
7. How does this comparison contribute to the meaning of the poem?
8. How does the comparison contribute to the feelings that you get?

9. In "cars are biological" what are cars being compared to? Is there anything else?
10. In what ways are they similar?
11. How does this comparison contribute to the meaning of the poem?
12. How does the comparison contribute to the feelings that you get?
13. In "a man without a car is like a clam without a shell", what does the man without a car and the clam without a shell have in common? Is there anything else?
14. In what ways are they similar?
15. How does this comparison contribute to the meaning of the poem?
16. How does the comparison contribute to the feelings that you get?
17. In "machinery is hell", what is machinery being compared to? Is there anything else?
18. In what ways are they similar?
19. How does this comparison contribute to the meaning of the poem?
20. How does the comparison contribute to the feelings that you get?
21. In "ford is skin of present animal", what is ford being compared to? Is there anything else?
22. In what ways are they similar?
23. How does this comparison contribute to the meaning of the poem?

24. How does the comparison contribute to the feelings that you get?
25. In "auto is shell", what is auto being compared to? Is there anything else?
26. In what ways are they similar?
27. How does this comparison contribute to the meaning of the poem?
28. How does the comparison contribute to the feelings that you get?
29. How are all of these comparisons related?
30. How does the poem make you feel now?
31. Is there anything you would like to add to your meanings?

"The Red Wheelbarrow"

1. What is "the red wheelbarrow glazed with rain beside the white chickens", being compared to? Is there anything else?
2. In what ways are they similar?
3. How does the comparison contribute to the meaning of the poem?
4. How does the comparison contribute to the feelings that you get?
5. How does the poem make you feel now?
6. Is there anything you would like to add to your meaning?

"Contemporary Man"

1. In "the thought-wing cracked and clipped", what is thought-wing compared to? (or what is being compared?) In there anything else?
2. In what ways are they similar?
3. How does this comparison contribute to the meaning of the poem?
4. How does the comparison contribute to the feelings that you get?
5. What is "the footprint" being compared to? Is there anything else?
6. In what ways are they similar?
7. How does this comparison contribute to the meaning of the poem?
8. How does the comparison contribute to the feelings that you get?
9. In "hope bud shrunk", what is hope bud compared to? Is there anything else?
10. In what ways are they similar?
11. How does this comparison contribute to the meaning of the poem?
12. How does the comparison contribute to the feelings that you get?
13. In "no Moses or star", what is Moses or star being compared to? Is there anything else?

14. In what ways are they similar?
15. How does this comparison contribute to the meaning of the poem?
16. How does the comparison contribute to the feelings that you get?
17. In "he is raped in desert solitude", who is he? What is desert solitude being compared to? Anything else?
18. What is "he is raped in desert solitude being compared to? In what ways are they alike? Is there anything more?
19. In what ways are they similar?
20. How does this comparison contribute to the meaning of the poem?
21. How does the comparison contribute to the feelings that you get?
22. How does the poem make you feel now?
23. Is there anything you would like to add to your meaning?

"First Thin Ice"

1. What is lovemaking being compared to? Is there anything else?
2. In what ways are they similar? Is there anything else?
3. How does the comparison contribute to the meaning of the poem?
4. How does this comparison contribute to the feelings that you get? Is there anything else?
5. How does the poem make you feel now?
6. Is there anything you would like to add to your meaning?

APPENDIX C

TWO EXAMPLES OF STUDENT RESPONSES

"Contemporary Man" (read & listen)

Q. How does the poem make you feel?

A. Sort of um, no good?

Q. What meaning did you get from the poem?

A. That, uh, he was out in the desert and he had no hope--nothing to hope for.

Q. Anything else?

A. PAUSE. No patience and all that.

Q. No what?

A. He had no patience and all that. Like, he's out in the desert and no hope...around or something.

Q. How did you get that meaning?

A. Okay, the thought wing cracked and clipped.

Q. How did that contribute to your meaning?

A. The--his thought cracked and clipped like it...the footprint erased he's out in the desert, the wind blew away the sand and can't, he's lost and stuff like that. His hope buds shrunk it says--so there's no hope. No Moses or star to follow by--he can't follow a star--nothing to follow.

Q. What do you think the though-wing is being compared to?

A. PAUSE. What, you mean the whole thing--the thought-wing cracked and clipped.

Q. Sure.

A. It's being compared to um...a big bird.

Q. In what ways are the thought wing and a bird similar?

A. Ahem. Well, you rely on the, the bird relies on his wings, man

relies on his though or something...

Q. How are they similar? Keep going. What is the point of similarity?

A. PAUSE. The bird flies, well, I don't know.

Q. Go ahead.

A. PAUSE. Like, what he's thinking, well the bird soars through the air with its wings. When a man's thinking he...starts to sort of fly around.

Q. How does this comparison contribute to the meaning of the poem?

A. Tells you that he's, he's thinking a lot.

Q. Does it contribute to the feelings that you get?

A. Sort of.

Q. In what way?

A. He's walking through the desert and he's thinking.

Q. How does that make you feel?

A. Nothing really.

Q. "The footprint erased", what is the footprint being compared to?

A. PAUSE. Hope and stuff like that.

Q. What do they have in common?

A. Well, the footprint, if you make a footprint it stays there and you, you got hope and it stays there.

Q. Now how does this comparison contribute to the meaning of the poem?

A. Well, it tells you that, it shows that he's lost, no footprints to follow or nothing; the footprints were erased, can't see where he came from or anything.

Q. Does it contribute to the feelings you get?

A. Ya. It, uh, makes you feel lost...nothing to hope for.

Q. "Hope bud shrunk" - what is that Hope bud being compared to?

A. A flower.

Q. What do you see in common?

A. Well, the flower it'll...well hope it, when you lose hope, it sorta, it'll sorta die away, hope just goes away just like a flower...it sorta just curls up...I guess.

Q. Anything else?...What do you mean by "curls up"?

A. Well, ya, a flower shrinks in that way.

Q. How does this comparison contribute to the meaning of the poem?

A. That his hope's gone--there's no hope.

Q. How does it contribute to the feeling you get?

A. Sort of alone.

Q. "No Moses or star", what is Moses or star being compared to?

A. Star, like, uh...didn't Jesus or whatever follow the star to Bethlehem or whatever. It was Moses, he was on the Arc, the animals were following him.

Q. What are these being compared to?

A. That he has nothing to follow by.

Q. What do these two things have in common?

A. Moses....."Moses & star? or "Moses or star"?

Q. No, "Moses or star" compared to what did you say - nothing to follow by?

A. Ya.

Q. What do those things have in common?

A. Well Moses...well the star, they followed the star, it showed them where to go and uh, and he doesn't know where to go.

Q. How does this contribute to the meaning of the poem?

A. It, uh, it, it's pointing out that he's lost.

Q. Does it contribute to the feeling you get?

A. Ya, it sorta makes you feel like you're lost.

Q. "He is raped in desert solitude" - who is the "he"?

A. The guy that's lost.

Q. What do you think the desert solitude's being compared to?

A. Well, the whole desert he's got it all lying in front of him, no where to go.

Q. What do you think the line "he...solitude" is being compared to?

A. He's being taken away by the desert. Nowhere to go--the desert's the only thing around.

Q. But do you think it's being compared to anything else or do you say it just is what it is?

A. Well, uh, just compared to, uh...shows that he is lost - compared to being lost.

Q. In what ways are all the comparisons related? "thought-wing... clipped", "footprint erased", "hopebud shrunk", "No Moses or Star", "being raped in desert solitude".

A. They all talk about alone.

Q. How does this add to the meaning of the poem?

A. It, uh, points out that he's in the desert and has nowhere to go - anywhere to go.

Q. How does the title relate to the poem?

A. No response.

Q. Do you know what "contemporary"means?

A. Not the direct meaning from the dictionary but...

Q. Okay, what do you think it means.

A. Contemporary, uh, that he's uh, just a minute...like uh, average man? should I say.

Q. Looking at that, how does the title relate to the poem?

A. It's, the poem's sort of a metaphor but.....feel left out sometimes.

Q. Who feels left out?

A. Man.

Q. Man feels left out sometimes?

A. Ya.

Q. Is there anything you'd like to add to the meaning of your poem?

A. That.....What did I say before?

Q. Uh, you said it was about a man being lost in the desert. Is there anything you want to add?

A. Okay...well, I guess that, uh, he's, he's thinking, there's no uh, nothing to fall back on in the desert - he's out in the middle of the desert, hope is all, no more hope, no hope, no star or anything to follow back.

Q. Okay. Did your feelings change at all?

A. Ya, it changed.

Q. Okay, how did they change?

A. Well, it just points out the loneliness--he's in the middle of the desert or whatever...alone.

Q. And that created what feeling in you? Or do you mean that you were feeling loneliness or what?

A. Uh...sort of.

Contemporary Man High Reader

Q. How does the poem make you feel?

A. Kind of worried.

Q. Anything else?

A. No.

Q. What meaning did you get from the poem?

A. That modern man is kinda molded and not allowed to grow as much as he wanted to and he's, he's uh, stuff is taken from him that he could have individually like.

Q. Tell me how you got that meaning?

A. Um, well, it says the thought wing cracked and clipped that would be like maybe not allowed to his own free thoughts and stuff, that his footprints are erased and um, he is raped in desert solitude that would mean kinda everything is taken away from him and he's left out in the open somewhere.

Q. Any other cues that influenced your meaning?

A. No.

Q. In that first line, what is the "thought-wing" being compared to?

A. I think it'd be the man's thoughts.

Q. How is the thought-wing and the man's thoughts similar?

A. Well, the thought-wing makes it kinda sound like the wing of a bird maybe that flies and it's thoughts are free to go and stuff.

Q. How does this comparison contribute to the meaning of the poem?

A. Well, it makes it sound like he, he could be really imaginative and stuff like that, but he is cracked and <u>clipped</u> and so it's all taken away from him.

Q. How does it contribute to the feeling that you get?

A. It kinda makes you feel like if you could, if people would just leave you alone and stuff, you, everybody would be so much better and stuff like that.

Q. "No Moses or star", what is that being compared to?

A. I'd say hope or something like that.

Q. What do you see in common between those?

A. Like Moses in the bible and the star I'd say the Star of Bethlehem you know, where it leads people to Jesus and stuff-that kinda starts a good turn and it says, "No Moses or Star", so there's kinda no hope for the future kinda thing.

Q. How does that comparison contribute to the feeling that you get?

A. Makes you, uh, kinda wonder what your life's gonna be like soon.

Q. "He is raped in desert solitude" - who is the "he"?

A. I think the man.

Q. Who?

A. The man that they're talking about in the poem

Q. What is desert solitude being compared to?

A. I think that means that like he's...desert solitude would be like something really open and empty and nothing there and stuff.

Q. What do you see in common between those?

A. The desert is really big and plain and he's all alone.

Q. "he is raped in desert solitude", what is that being compared to?

A. I think that would mean that his everything's taken away from him and he's left in kind of a lonely place all by himself with nothing around him and stuff.

Q. What do those two have in common?

A. The desert solitude and the...

Q. The whole thing--the "raped in desert solitude".

A. Oh, well there, they mean well, like he's raped, that means stuff's taken away from him or something and in desert solitude would be just loneliness, well not loneliness but all alone.

Q. How does that contribute to the feeling that you get?

A. That makes you feel kinda sad and stuff like, kinda worried maybe that you're gonna be left alone and stuff taken from ya and stuff.

Q. How does the title relate to the poem?

A. Well, makes it, makes it uh, seem like it's supposed to be contemporary man is supposed to be up to date and modern and everything but really he's uh, he's not, he's being molded and stuff like that and it's not as good as like, Contemporary Man sounds good and the poem makes it, cuts it down and stuff.

Q. Is there anything you'd like to add to your meaning?

A. Um, no I think it's okay.

Q. And your feelings, did they change?

A. No, they're the same.

APPENDIX D

ANALYSIS OF RELATIONSHIPS IN THE INTERPRETATION

"Night Crow"

Reading & Listening

Independent			Probing		
Feeling	Meaning	Relationships	Feeling	Meaning	Relationships
sad	It seems like a person that reminds them of something else and the memory's getting farther and farther back - they're kind of losing it, so it's sad. They're losing a memory and they see something that reminds them of something else. The memory's kind of fading and they don't, they can't remember as much of it as they used to.				
	Cues				
	1. When I saw the clumsy crow from the wasted tree, they saw something and then,	Clumsy crow saw something losing it			
	2. a shape in the mind rose up--I kinda got that as they remembered something and then,	a shape in the mind memory			
	3. further and further away, they kinda can't remember	further and further away can't remember			

"Night Crow"
Reading & Listening

Independent			Probing		
Feeling	Meaning	Relationships	Feeling	Meaning	Relationships
	it more, and then,				
	4. deep in the brain far back, it's something that happened a long time ago, they can't kinda remember, they want to, but they can't.	deep in the brain far back a memory of something that happened long ago can't remember			
					clumsy crow from wasted tree something useless clumsy crow somebody that doesn't know what they're doing
				not really set down, drifting (crows don't really ever stay in the sameplace)	an old - no not old, but something that's not altogether they're kinda clumsy and stumbling
			Sad, cause you see the clumsy and wasted stuff	It makes it seem like his memory that he's thinking about was something that was, that happened when he was like that	dead, all cut up, not good anymore

"Night Crow"
Reading & Listening

Independent			Probing		
Feeling	Meaning	Relationships	Feeling	Meaning	Relationships
					gulfs of dream all of his dreams altogether a lot
	gulf - big grouping of something or a separate part of something else.				going over them picks out this one
			makes it kind of drifti- er	It makes it seem like he's had a lot more experi- ences that he remembers too, and this one stands out	tremendous bird his mind going through his dreams and picking out the special one flies go to wherever wants
			no	It makes the per- son thats thinking about it seem older, maybe.	moonless black deep in the brain something way back in his mind that he hasn't thought of for a long time old happened a long time ago
				Title: The night would be black and dark so you really can't see it and the	

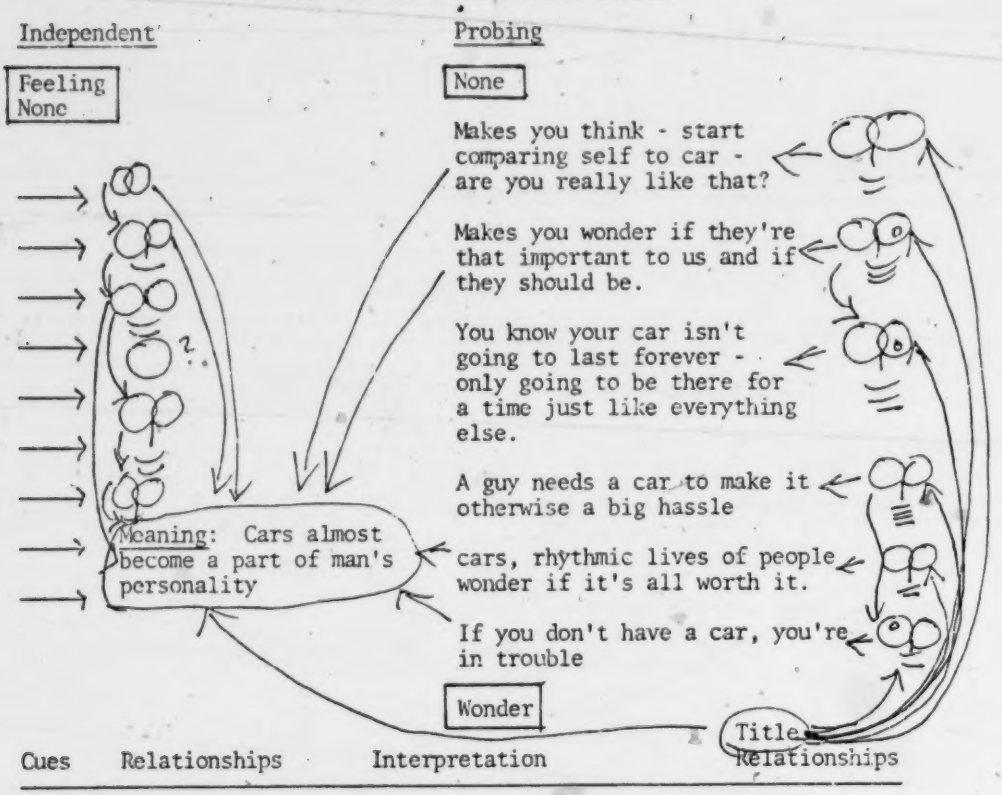
"Night Crow"
Reading & Listening

Independent			Probing		
Feeling	Meaning	Relationships	Feeling	Meaning	Relationships
				crow would be something that kind of drifts.	
			Feel sorry for the person that's remembering	The person that sees something older that reminds him of something that he can't really remember then	

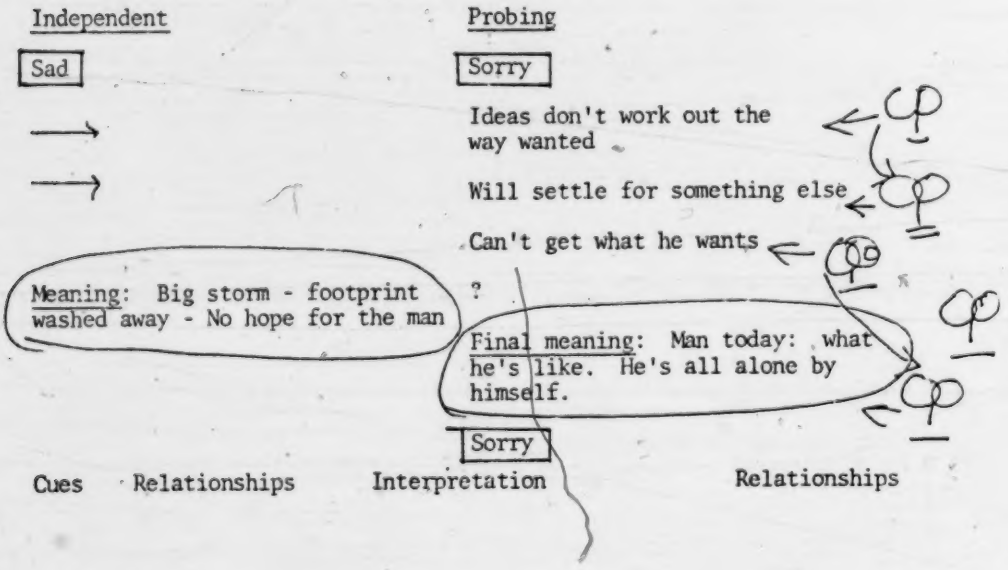
APPENDIX E

PATTERNS OF METAPHORICAL PROCESSING WHEN READING AND LISTENING, LISTENING, AND READING

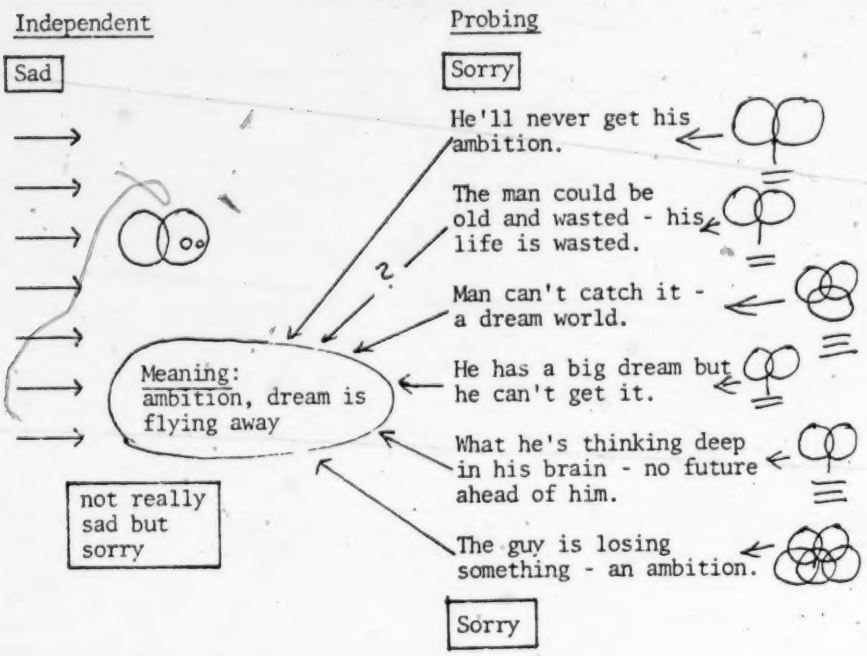
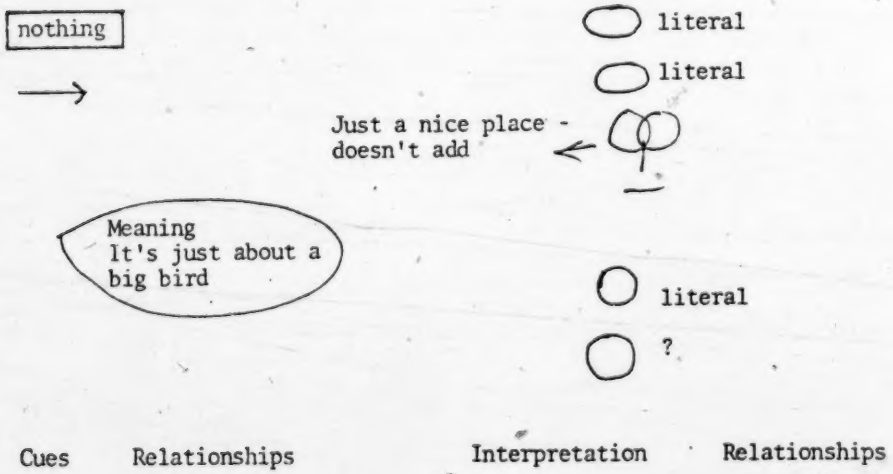
LISTENING AND READING: HIGH READER


Independent
Probing
Feeling
None
None
Makes you think - start comparing self to car - are you really like that?
Makes you wonder if they're that important to us and if they should be.
You know your car isn't going to last forever - only going to be there for a time just like everything else.
A guy needs a car to make it otherwise a big hassle
cars, rhythmic lives of people wonder if it's all worth it.
If you don't have a car, you're in trouble
Meaning: Cars almost become a part of man's personality
Wonder
Title
Cues
Relationships
Interpretation
Relationships

LISTENING: LOW READER



READING: LOW READER


Independent
Probing
Sad
Sorry
He'll never get his ambition.
The man could be old and wasted - his life is wasted.
Man can't catch it - a dream world.
He has a big dream but he can't get it.
What he's thinking deep in his brain - no future ahead of him.
The guy is losing something - an ambition.
Meaning: ambition, dream is flying away
not really sad but sorry
Sorry
Cues
Relationships
Interpretation
Relationships

AN EXAMPLE OF PATTERN BREAKDOWN